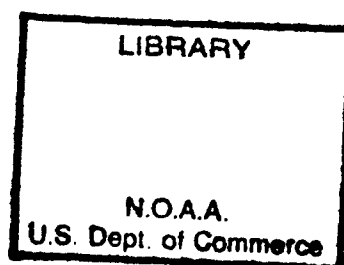




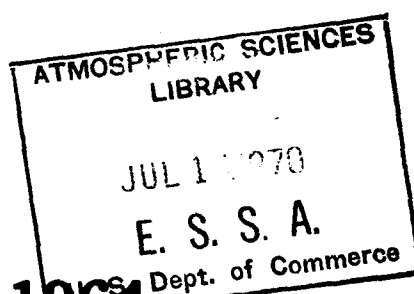
UNITED ARAB REPUBLIC



MONTHLY WEATHER REPORT

VOLUME 7

NUMBER 1



JANUARY, 1964

QC
991
.E3
M6
v. 7
(1964)

U.D.C. 551. 506.1 (62)

MINISTRY OF SCIENTIFIC RESEARCH—METEOROLOGICAL DEPARTMENT
CAIRO

158 994

National Oceanic and Atmospheric Administration

Environmental Data Rescue Program

ERRATA NOTICE

One or more conditions of the original document may affect the quality of the image, such as:

Discolored pages

Faded or light ink

Binding intrudes into the text

This document has been imaged through the NOAA Environmental Data Rescue Program. To view the original document, please contact the NOAA Central Library in Silver Spring, MD at (301) 713-2607 x124 or www.reference@nodc.noaa.gov.

Information Manufacturing Corporation

Imaging Subcontractor

Rocket Center, West Virginia

September 14, 1999

PUBLICATIONS OF THE METEOROLOGICAL DEPARTMENT OF THE UNITED ARAB REPUBLIC—CAIRO

In fulfilment of its duties as the National Meteorological service for the U.A.R. the Meteorological Department issues several reports and publications on weather, climate and agrometeorology. The principal publications are described on this page.

Orders for publications should be addressed to :—

“The Director General, Meteorological Department, Kubri-el-Qubbeh—CAIRO”.

THE DAILY WEATHER REPORT

This report is printed daily in the Meteorological Department. It contains surface and upper air observations carried by the relevant networks of the Republic and made at the four main synoptic hours of observations (00, 06, 12 and 18 U.T.); as well as ship observations over the Eastern Mediterranean and north Red Sea made at the same times.

It also contains two surface synoptic charts at 00 and 12 U.T. and two upper air charts for the standard isobaric surfaces 700 & 500 mbs. at both 00 and 12 U.T.

In compliance with resolution 8 (EC-XIII) of WMO, foreign upper air data included in Cairo Subregional Broadcast are also given in this report.

THE MONTHLY WEATHER REPORT

First issued in 1909, the Monthly Weather Report served to give a brief summary of the weather conditions that prevailed over Egypt during the month, with a table showing the mean values for few meteorological elements and their deviations from the normal values. From 1954 to 1957 this report was in a rapid state of development and extension resulting into a voluminous report on January 1958 giving surface, upper air, and agro-meteorological data for U.A.R.

THE AGRO-METEOROLOGICAL ABRIDGED MONTHLY REPORT

Gives a review of weather experienced in the agro-meteorological stations of the U.A.R. as well as monthly values of certain elements.

THE ANNUAL REPORT

This report gives annual values and statistics for the various meteorological elements, together with a summary of the weather conditions that prevailed during all months of the year .

CLIMATOLOGICAL NORMALS FOR EGYPT

The normals, long averages and statistical data are given in one edition for stations in Egypt from the date of opening of each station up to 1945, A new voluminous edition was issued in March 1968 which brings normals and mean values up till 1960.



UNITED ARAB REPUBLIC

MONTHLY WEATHER REPORT

VOLUME 7

NUMBER 1

JANUARY, 1964

U.D.C. 551. 506.1 (62)

MINISTRY OF SCIENTIFIC RESEARCH—METEOROLOGICAL DEPARTMENT
CAIRO

CONTENTS

| | Page |
|--|-------|
| Foreword | 1, 2 |
| Introduction and Explanation of the Tables | 3-12 |
| List of Stations Appearing in the Report | 13 |
| General Summary of Weather Conditions | 14-16 |

SURFACE DATA

| | |
|---|--------|
| Table A1.—Monthly values of the Atmospheric Pressure, Air Temperature, Relative Humidity, Bright Sunshine Duration and Piche Evaporation | 17 |
| „ A2.—Maximum and Minimum Air Temperatures | 18 |
| „ A3.—Sky Cover and Rainfall | 19 |
| „ A4.—Number of Days of Occurrence of Miscellaneous Weather Phenomena | 20 |
| „ A5.—Number in Hours of Occurrences of Concurrent Surface Wind Speed and Direction Recorded Within Specified Ranges | 21, 22 |

UPPER AIR DATA

| | |
|--|--------|
| Table B1.—Monthly Means and Monthly Absolute Higher & Lower Values of Altitude, air Temperature & Dew point at Standard and Selected Pressure Surface | 23, 24 |
| „ B2.—Mean and Extreme values of The Freezing Level and The Tropopause; The Highest Wind Speed in The Upper Air | 25 |
| „ B3.—Number of Occurrences of Wind Direction Within Specified Ranges and The Mean Sea'ar Wind Speed at the Standard and Selected Pressure Surfaces | 26-28 |

AGRO-METEOROLOGICAL DATA

| | |
|---|----|
| Table C1.—Air Temperature at 2 Metres Above Ground | 33 |
| „ C2.—Absolute Values of Air Temperature at 2 Metres Above Ground, Absolute Minimum Air Temperature at 5 Cms Above Ground Over Different Fields | 33 |
| „ C3.—(Solar + Sky) Radiation, Duration of Bright Sunshine, Relative Humidity and Vapour Pressure at 2 Metres Above Ground, Evaporation and Rainfall | 33 |
| „ C4.—Extreme Soil Temperature at Different Depths in Different Fields. | 34 |
| „ C5.—Surface wind | 34 |

FOREWORD

Since 1909 the Meteorological Department of Egypt has been issuing regularly the Monthly Weather Report, giving a brief summary of the weather conditions prevailing over Egypt during the month. These reports used to include a table giving limited climatological data for some selected surface observations.

On January 1954, the Monthly Weather Report has been revised and the general summary of the weather conditions has been extended to give a more detailed description of the synoptic situations and the associated weather prevailing during the month.

On February 1955 a further extension took place, the general summary of the weather conditions has been classified into different items to give more comprehensive information. More detailed surface climatological tables for selected stations and table for miscellaneous weather phenomena have been added to the Report.

On January 1956, the climatological tables included in the Report have been extended to include upper air climatological data to meet the increasing demand for this information.

In addition the full text of the monthly report of the standard observations taken at the Central Agro-Meteorological Station at Giza has been included in this Report instead of issuing it as a separate bulletin.

On January 1957, the Report has been completely revised, a new set of meteorological tables has been introduced to give, as far as possible, complete information for surface and upper air data from a more representative network of stations.

In addition a general review of the observations taken in the fields of the plant breeding farm at Giza is included in the Report. The review gives a brief summary of the characteristic features of the different meteorological and micrometeorological elements of the month, more weight is given in this review to those elements which are of interest to agriculturists.

Starting from the Report of January 1958, the Monthly Weather Report for the U.A.R. included a detailed description of the synoptic situations and the associated weather experienced all over the Republic during the month. The Report included a new set of tables giving more detailed surface and upper air climatological data for selected stations in the Republic. The review of the Agrometeorological station at Giza and the normal observations made at the field of the Station were also included in the Report.

As from January 1960, these tables have been totally revised and some new tables have been introduced to include more detailed climatological data.

In order to explain how the tables included in these Monthly Weather Reports have been compiled, detailed notes are included in the Report of January 1960 giving information about the instruments used and their exposure, the methods of observations and the methods of computing the means and frequencies.

As from January 1964, the Monthly Weather Report was again totally revised. The number of meteorological stations appearing in the Report have been concentrated in the main synoptic stations working mostly continuously 24 hours. In addition

climatological data included in the Report will be confined to the monthly mean values, monthly totals, monthly frequencies and monthly absolute values. More specific climatological data have to be requested from the Meteorological Department.

Starting from the Report of January 1958, the monthly Weather Report of the U.A.R. carries serial reference in volume and number; each year carries a serial number in volume, Number I, being for January and 12 for December. The reference number of January 1958 is volume I, number I.

Cairo, 12-2-1970

M. F. TAHA

**Under Secretary of State
Director General
Meteorological Department**

INTRODUCTION AND EXPLANATION OF THE TABLES

For the purpose of this Monthly Weather Report, the United Arab Republic is divided into six climatic districts as follows:—

| Number | District | Number | District |
|--------|--------------------|--------|----------------|
| I | Mediterranean Area | IV | Upper Egypt |
| II | Lower Egypt | V | Western Desert |
| III | Cairo Area | VI | Red Sea Area |

The data included in Tables A1, A2, A3, A4 & A5, are based on surface observations made at a representative selection of the basic network of synoptic stations. The data included in Tables B1, B2 & B3 refer to Upper Air observations. The data included in Tables C1, C2, C3, C4 & C5, are based on observations taken at the Central Agro-Meteorological station at Giza and the Agro-Meteorological stations at Tahrir, El Kasr and Kharga. The observation field at Giza is divided into several plots, each of area about 400 to 600 square metres, three of these plots are used for standard observations running throughout the whole year, the first serves as a dry and bare field, the second as a wet and bare field and the third as a wet field covered with grass (libia). The observation fields at Tahrir, El Kasr and Kharga are considered for the moment as dry and bare fields. At Kharga Oasis, the observation field is of the size of about 4000 - 6000 square metres.

The soil characteristics of these fields are:

| | EL KASR | TAHRIR | GIZA | KHARGA |
|-----------------------------------|--------------------------|--------------------------|---------------------------|---------------------------------|
| Top soil type | not available at present | Pure sand | Permeable clay | Sandy loam granular non-compact |
| Top soil depth | „ | More than 3 metres. | More than 1.5 metres | 20 cms. |
| Sub soil type | „ | Pure sand | Clay loam and loam | Platey clay non-compact |
| Slope of ground and its direction | „ | ½ % towards East & North | Flat (0-0.3%) | Flat (0-0.3%) |
| Level of water table | „ | More than 5 metres | 1.0-1.5 m. approximately. | More than 5 metres |

Except for the wind speed which is expressed in knots, the metric units are used throughout this report and are as follows :—

- The atmospheric pressure is expressed in millibars (one millibar = 1000 dynes per square centimetre = the pressure due to 0.7501 millimetre of mercury at 0°C at latitude 45°),
- Air and soil temperatures in degrees celsius (°C),
- Relative humidity (%),
- Rainfall in millimetres,
- Snow depth in centimetres,
- Duration of bright sunshine in hours,
- Sky cover in oktas,
- Evaporation in millimetres,
- Altitude of pressure surface in geopotential metres,
- Mean wind speed of the whole day, and of the day — time and the night — time intervals in metres per second,
- (Solar + Sky) radiation in gram-calories per centimetre square,
- Vapour pressure in millimetres.

TABLE A1.— Monthly values of the Atmospheric Pressure, Air Temperature, Relative Humidity, Bright Sunshine Duration & Piche Evaporation

Atmospheric Pressure.

The monthly mean values of the daily atmospheric pressure corrected to Mean Sea Level (M.S.L.) are the arithmetic means over the month of their corresponding daily hourly values or of the daily observations taken at the 8 synoptic hours (00,03, 06, 09, 12, 15, 18 & 21 UT). The atmospheric pressure is measured by mercury barometers installed indoors; The Mean Sea Level Pressure (M.S.L.) is the barometer reading corrected for the height of the barometer cistern above or (below) the Mean Sea Level at the station. Corrections for index, temperature and latitude have been applied to the barometer readings before reduction to M.S.L. Deviations from normals appear besides monthly mean values in a separate column.

Air Temperature.

The monthly mean values of the maximum (A) and of the minimum (B) air temperatures are computed from their corresponding daily routine values observed over the month. The maximum (mercury) and the minimum (alcohol) thermometers are freely exposed in the louvered screens with their bulbs at a height of 160 to 170 centimetres above the ground. Deviations from normals appear besides monthly mean values.

The monthly mean values of $A + B/2$ are computed from their corresponding daily calculated values over the month.

The monthly mean values of the dry and of the wet bulb air temperatures are the arithmetic means over the month of their corresponding daily hourly values or of their corresponding values at the 8 synoptic hours (00,03, 06, 09, 12, 15, 18 & 21 UT). The dry and wet bulb thermometers used are of the mercury type and are freely exposed in sloping double roofed louvered screens with their bulbs at a height of 140-150 centimetres above the ground. Deviations from normals appear besides monthly mean values in a separate column.

Relative Humidity

The monthly mean values of the relative humidity are the arithmetic means over the month of its corresponding daily hourly values or of its corresponding values at the 8 synoptic hours (00, 03,06, 09, 12, 15, 18 & 21 U.T). The relative humidity (%) is derived from the dry and wet bulb thermometer readings using Jellink's Psychrometer Tables (Liepzig 1911). No corrections for wind speeds or atmospheric pressure are applied. Deviations from normals appear besides monthly mean values in a separate column.

Bright Sunshine Duration

The actual duration of bright sunshine for the month is the sum of the actual daily bright sunshine durations. The total possible duration for the month is the sum of the daily calculated periods between sunrise and sunset. In calculating the possible duration of sunshine for a given day, the period of cut-off for that day caused by obstacles, such as mountains are eliminated from the possible duration with an ideal flat horizon. In case of stations where the record of day or more is or are missing, the total actual duration is given between brackets and a note is added at the end of the table giving the actual number of records (days) used in summing up this total actual. In such cases the corresponding total possible duration is also given in brackets and it is the sum of the possible duration of the days of the available records. The percentage of the actual to the possible duration appears besides the total possible values in a separate column. The duration of bright sunshine is measured by the Campbell-Stokes sunshine recorders which are suitably exposed.

TABLE A5.— Number in Hours of Occurrences of Concurrent Surface Wind Speed and Direction Recorded Within Specified Ranges.

The elements used in preparing this table are the mean hourly values of the surface wind speed and the corresponding mean hourly values of direction taken from the daily records of the surface wind instruments installed at the station. These mean hourly values are extracted for every hour of each day of the month and they refer to a period of 60 minutes centred at the hour.

The number in hours of occurrences of the surface wind falling within the ranges of speed and direction indicated in the table is the number of cases when the mean hourly values of the surface wind, as defined have satisfied these ranges.

The number in hours of "variable" winds is the number of cases where the surface wind showed no definite direction over the period of the 60 minutes centred at the hour or when the wind vane was sticking over that period due to the lightness of the wind and not responding to the variation in wind direction; in such cases the mean wind speed over this period is normally less than 5 knots. The number in hours of "calm" winds is the number of cases where the surface wind has a mean speed of less than one knot over that period whatever the mean wind direction over the same period is. The number in hours during which the recording instrument failed to record over the whole month is given under a separate column.

The instruments used for recording the surface wind are of the Dines Pressure Tube Anemograph.

This table follows the general lines of Model B of chapter 12 part IV of the WMO Technical Regulations 1959. The ranges of wind speed are (1-10), (11-27), (28-47) knots and 48 knots or more; the ranges for wind direction are twelve ranges of 30° each, beginning with the range (345°-014°) as being the true north.

This table gives the following data

- The total number in hours of simultaneous occurrences of surface wind satisfying the specified ranges of speed and direction during the month,
- The total number in hours of occurrences of surface wind satisfying the specified ranges of speed during the month irrespective of their direction,
- The total number in hours of occurrences of surface wind blowing from the specified ranges of direction during the month irrespective of their speed.

TABLE B1.—Upper Air Climatological Data

The routine upper air observations are taken at 0000 and 1200 U T, a separate table of this type is prepared for each hour. The number of cases the height of each of the pressure surfaces indicated in the table has been attained during the month, and the number of cases the temperatures and the dew points have been observed at each of these surfaces are given in the table against each element under column (N).

The monthly mean values of the altitude, temperature and dew point at each of these pressure surfaces are the arithmetical means of the corresponding daily values over the number of cases (N) indicated against each element.

The instruments used are of the radiosonde modulating frequency recording type; the types of transmitters used do not need to apply any corrections for radiation.

This table follows the general lines recommended by the commission for climatology of the World Meteorological Organization Rec. 34 (CCL-1); it gives the following data for the hour of observation indicated at the top of the table :

— The number of cases the height of each of the pressure surfaces has been attained during the month and the number of cases the temperature and dew point at these surfaces have been observed,

— The monthly mean values of the atmospheric pressure corrected to the ground level of the station (H); the highest and lowest values of this pressure observed during the month,

— The monthly mean values of the air temperature and of the dew point at the surface; the highest and lowest values of the surface air temperature observed during the month,

— The monthly mean, the highest and the lowest values of the altitude for each of the pressure surfaces,

— The monthly mean, the highest and the lowest values of air temperature; and the mean dew point at each of the pressure surfaces.

TABLE B2.— Mean and Extreme Values of the Freezing Level and the Tropopause; The Highest Wind Speed in the Upper Air.

The routine upper air observations are taken at 0000 and 1200 UT ; a separate table of this type is prepared for each hour as indicated in the notes on table B1. The number of cases the altitude of the freezing level and of the first tropopause have attained during the month and the number of cases the pressures and the dew points or temperatures have been observed at these levels are given in the table against each element in the (N) box.

The monthly mean values of the altitudes of the freezing level and of the first tropopause and the monthly mean values of the pressures and of the dew points or temperatures at each of these levels are the arithmetical means of the corresponding daily values over the number of cases (N) indicated in the box of each element.

The first tropopause is determined in accordance with the definition adopted by the Executive Committee of the World Meteorological Organization Resolution 21 (Ec - IX).

This table is based on wind observations taken by the SCR — 658 or the Metox radiotheodolites working simultaneously with the radiosonde observations. The types of radiosonde instruments used are given in the notes on table B1.

This table gives the following data for each hour of observation indicated at the top of the table :

— The number of cases the freezing level has been attained during the month and the number of cases the pressure and dew point have been observed at this level.

— The number of cases the altitude of the first tropopause has been attained during the month and the number of cases the pressure and the temperature have been observed at this level,

— The monthly mean values of the altitude, pressure and dew point of the freezing level,

— The altitudes, pressures and dew points of the highest and lowest freezing level observed during the month,

— The monthly mean values of the altitudes, pressures and temperatures of the first tropopause,

— The altitudes, pressures and temperatures of the highest and lowest first tropopause observed during the month,

— The direction and speed of the highest wind speed observed during the month, the altitude at which this wind has been observed.

TABLE B3.—Number of Occurrences of Wind Direction Within Specified Ranges and the Mean Scalar Wind Speed at the Standard and Selected Pressure Surfaces

The routine upper air observations are taken at 0000 and 1200 U.T. A separate table of this type is used for each station.

The mean scalar wind speed "ffm" of winds blowing from each range of directions at a given pressure surface, is the arithmetical mean of the corresponding daily values of wind speed for the number of cases "N" during the month.

The term "Calm" is used in this table to denote wind speed of less than one knot.

This table is based on the wind observations taken at the station as indicated in the notes on table B2.

This table, as in the case of table B1, follows the general lines recommended by the commission for Climatology of the World Meteorological Organization REC. 34 (CCL-I) ; the ranges of wind direction used are twelve ranges of 30° each beginning with the range (345°—014°) as being the true north. This gives the following data for the hour of observation indicated :

- The number of cases (N) the wind has been observed from the specified ranges of direction at the surface of the station and at the different pressure surfaces during the month.
- The total number of cases (TN) the wind has been observed at the surface of the station and at the different pressure surfaces during the month irrespective of the wind direction,
- The mean scalar wind speeds (ffm) blowing from the ranges of direction specified at the surface of the station and at the different pressure surfaces,
- The number of cases of "calm" winds at the surface of the station and at the different pressure surfaces,
- The mean scalar wind speeds at the surface of the station and at the different pressure surfaces blowing from all directions.

AGRO-METEOROLOGICAL DATA

Reviews of Agro-Meteorological Stations at El Kasr, Tahrir, Giza, & Kharga.

The monthly review of all agro-meteorological elements that have been observed at each agro-meteorological station includes a general summary of pronounced weather phenomena that prevailed during the month together with a comparison between the monthly values of this year and last year of specified elements that are of great interest to agriculturists as well as to agrometeorologists. For some elements when observations are of a long time, departure from normal values appears also in the monthly review.

During winter, the monthly review includes normally the days of air temperature below 0°C at the height of five centimetres above the top of grass (Libia). The records of a mercury in steel recording thermometers are used for this purpose ; the sensitive part of the instrument is exposed in the open air and is mounted on a wooden support at the height indicated.

TABLE C1.—Air Temperature at 2 meters Above Ground.

The monthly mean values of the maximum, minimum, night time mean and day time mean, mean of day of air temperatures are the arithmetic means over the month of their corresponding daily values. The mean air temperature of the day is the mean of the hourly values of the dry bulb temperatures during the day. The night—time mean air temperature of the day is obtained graphically to the nearest whole degree from the charts of recording thermometers for the period from sunset of the previous day to sunrise of that day; the day-time mean temperature is similarly obtained for the period from sunrise to sunset of the same day. The duration of air temperatures above a specified limit of temperature is obtained graphically from the same charts, daily to the nearest half hour.

The maximum (mercury), the minimum (alcohol) and the dry bulb (mercury ventilated) thermometers are freely exposed in sloping double roofed louvred screens with their bulbs at a height of 210-220 centimetres above ground; the recording thermometer used is of the bi-metallic type and is exposed in a similar screen; the height of the bi-metallic piece is 210 centimetres approximately above the ground.

TABLE C2.—Extreme Values of Maximum & Minimum Air Temperatures at 2 meters above Ground, Absolute Minimum Air Temperature at 5 cms above Ground over Different Fields

The extreme values of maximum and minimum air temperatures at 2 metres above ground and of minimum air temperatures at 5cms above ground over dry and grass fields are extracted from their corresponding daily routine values. Dates of occurrences are included in separate columns beside the extreme value. Extreme values of maximum & minimum air temperature at 2 metres include the highest & lowest limits of the daily corresponding routine values during the month. The types and exposures of the minimum thermometers used over the different fields are as in the case of the grass minimum referred to in notes on the table A2.

TABLE C3.—(Solar + Sky) Radiation, Duration of Bright Sunshine, Relative Humidity, Vapour Pressure at 2 metres above Ground, Evaporation & Rainfall.

The monthly total values of the (Solar + Sky) Radiation, Bright sunshine duration, Evaporation & Rainfall are the sums of their corresponding daily values for the month. The monthly mean values of the (Solar+Sky) Radiation, Relative Humidity, Vapour Pressure at 2 metres & Evaporation are the arithmetic means of their corresponding daily values for the month respectively.

The (Solar + Sky) radiation is obtained from the records of a Robitzsch Actinograph; the Robitzsch values at Giza and Tahrir are regularly compared with the records of an Eppley pyrliometer. The sensitive elements of the Robitzsch Actinograph and of the Epply pyrliometer are at 100 cms approximately above the ground.

The types of instruments used for the measurement of the duration of bright sunshine, their exposure and the evaluation of the durations are as given in the notes on table A 1.

The duration of the relative humidity above 90% and above 80% are given to the nearest hour and are obtained graphically from the records of a hair hygograph exposed in a sloping double roofed louvred screen at a height of 210 centimetres approximately above ground.

The relative humidity is derived from the readings of ventilated dry and wet bulb mercury thermometers freely exposed in the same screen, using the Aspirations—Psychrometer-Tafeln of the Deutschen Wetter Dienst 1955; the height of the bulbs is 210 centimetres approximately above the ground. The mean relative humidity of the day is the mean of the hourly values observed during day.

The vapour pressure values are derived from the same Aspiration Psychrometer tables. The mean of the day of the vapour pressure is the mean of the hourly values computed during day.

Evaporation measurements are taken once daily at 0600 UT from a Piche tube and also a class "A" evaporation pan and give the evaporation for the previous 24 hours. The Piche tube is freely exposed in the open air at a height of 120 centimetres above dry soil ; the colour and effective area of the evaporation disc are as given in the notes on table AI. The class "A" evaporation pan is of the type recommended by the Commission of Instruments and methods of Observation of the World Meteorological Organization Rec. 42 (CIMO-56) ; it is of a cylindrical shape, 25.4 centimetres deep, 120 centimetres in diameter (inside dimensions). The pan is freely exposed in the open air in the wet field covered with grass (libia), its rim at a height of 41 centimetres above ground away from obstacles such as buildings or trees.

The types of instruments used for measuring the amount of rainfall, their exposure and the evaluation of these amounts are given in the notes on table A3.

TABLE C4.—Extreme Soil Temperature at Different Depths in Different fields. (cms.)

The highest and lowest values of soil temperatures at the selected depths in dry & grass covered fields are extracted from their corresponding daily routine values.

The soil temperature readings are taken in the different fields at the specified depths ranging from 0.3 cm to 300 cms. in each field as indicated in the table. These readings are taken regularly according to the following schedule :

- Daily at 0000 U.T., 0200 U.T and every 2 hours for the 0.3, 1, 2 and 5 centimetres depths.
- Daily at 0000 U.T., 0300 U.T and every 3 hours for the 10 and 20 centimetres depths.
- Daily at 0000, U.T., 0600, U.T and every 6 hours for the 50 centimetres depth.
- Daily at 1000 U.T. for the 100 and 200 centimetres depths.
- Once every 5 days at 1000 U.T. for the 300 centimetres depth.

The thermometers used are of the Fuess or the Friedrich types.

TABLE C5.—Surface Wind

The monthly values, of the daily mean, the night time mean and of the day time mean of the surface wind speed is the arithmetic mean of their corresponding daily evaluated values for the month respectively. The mean wind speed of the day is computed for the period of 24 hours from 1600 UT of the previous day ; the night-time mean wind speed of the day is obtained from the total run of air during the period 1600 UT of the previous day to 0600 UT of that day ; the day-time mean is similarly computed for the period 0600 to 1600 UT of the same day. The type of the wind instrument used is of the run counter of the Lambrecht type ; the cups of which are at 2 metres above the ground.

The number of days with surface wind speed reaching or exceeding specified values of velocities (≥ 10 knots, ≥ 15 knots, ≥ 20 knots, ≥ 25 knots, ≥ 30 knots, ≥ 35 knots and ≥ 40 knots) for at least 5 minutes at any time between 2200 & 2200 UT irrespective of its direction are extracted from the daily routine analysis of surface wind records during the whole month. The daily records of the Dine Pressure Tube Anemograph are used, the highest gust refer to the highest excursive made by the velocity pen on the records during the month

| District. | Station | Index Number II iii | Latitude °N | Longitude °E | Elevation of the ground in metres (H or Ha) | Altitude of the Station in metres (Hp) | Altitude of the barometer cistern in metres | Height of Wind recording instruments (metres) above | | Synoptic Observations | | | | | | | | Hourly Observations (H) Half hourly obs. ms (h) (0000—2400) | Upper air observations P (Pilot Balloon) W (Radio wind) R (Radio Sonde) | | | | Remarks |
|----------------|----------------------------|------------------------|-------------|--------------|--|---|--|--|-----------------|--------------------------|----|----|----|----|----|----|----|---|--|----|----|----|---------|
| | | | | | | | | above build- ing | above ground | 00 | 03 | 06 | 09 | 12 | 15 | 18 | 21 | | 00 | 06 | 12 | 18 | |
| | | | | | | | | | | | | | | | | | | | | | | | |
| Mediterranean | Sallum | 62 | 300 | 31 32 25 11 | 4.0 | 6.0 | 5.2 | — | — | x | x | x | x | x | x | x | x | H | P | P | P | P | |
| | Mersa Matruh (A) | | 306 | 31 20 27 13 | 28.3 | 30.0 | 30.0 | 8 | 15 | x | x | x | x | x | x | x | x | H | RW | P | P | P | |
| | Alexandria (A) | | 318 | 31 12 29 57 | — 3.4 | 7.0 | 6.8 | 10 | 18 | x | x | x | x | x | x | x | x | H | P | P | P | P | |
| | Port Said (A) | | 333 | 31 17 32 14 | 1.9 | 6.1 | 6.1 | 10 | 19 | x | x | x | x | x | x | x | x | H | P | P | P | P | |
| | El Arish | | 336 | 31 07 33 45 | 15.0 | 17.1 | 17.1 | 10 | 15 | x | x | x | x | x | x | x | x | H | P | P | P | P | |
| | Ghazza | | 338 | 31 30 34 27 | 9.7 | 15.7 | 15.7 | 10 | 18 | x | x | x | x | x | x | x | x | H | P | P | P | P | |
| Lower Egypt | Tanta | | 348 | 30 47 31 00 | 14.0 | 14.8 | 15.4 | 10 | 14 | — | — | x | x | x | x | x | — | H | — | — | — | — | |
| Cairo Area | Cairo (A) | | 366 | 30 08 31 34 | 94.7 | 74.5 | 74.0 | 14 | 18 | x | x | x | x | x | x | x | x | h | — | — | — | — | |
| | Helwan | | 378 | 29 52 31 20 | 139.3 | — | — | — | — | — | — | — | — | — | — | — | — | — | BW | W | RW | W | |
| Upper Egypt | Fayoum | | 381 | 29 18 30 51 | 22.0 | 23.3 | 23.2 | 10 | 14 | — | — | x | x | x | x | x | — | H | — | — | — | — | |
| | Minya (A) | | 387 | 28 05 30 44 | 29.0 | 40.0 | 44.2 | 7 | 10 | x | x | x | x | x | x | x | x | H | P | P | P | P | |
| | Assyout (A) | | 393 | 27 11 31 06 | 71.0 | 69.6 | 69.5 | 15 | 20 | x | x | x | x | x | x | x | x | H | P | P | P | P | |
| | Luxor (A) | | 405 | 25 40 32 42 | 94.9 | 88.5 | 88.4 | 7 | 15 | x | x | x | x | x | x | x | x | H | P | P | P | P | |
| | Aswan (A) | | 414 | 23 58 32 47 | 200.0 | 193.5 | 200.0 | 10 | 14 | x | x | x | x | x | x | x | x | H | RW | W | RW | W | |
| Western Desert | Siwa | | 417 | 29 12 25 29 | —15.0 | —13.5 | —13.3 | 10 | 17 | x | x | x | x | x | x | x | x | H | P | P | P | P | |
| | Baharia | | 420 | 28 20 28 54 | 128.0 | 129.5 | 129.6 | — | — | x | x | x | x | x | x | x | x | H | P | P | P | P | |
| | Farafra | | 423 | 27 03 27 58 | 90.0 | 91.8 | 92.1 | — | — | x | x | x | x | x | x | x | x | H | P | P | P | P | |
| | Dakhla | | 432 | 25 29 29 00 | 110.0 | 111.5 | 111.5 | 10 | 15 | x | x | x | x | x | x | x | x | H | P | P | P | P | |
| | Kharga | | 435 | 25 27 30 32 | 77.8 | 72.8 | 78.8 | — | — | x | x | x | x | x | x | x | x | H | P | P | P | P | |
| Red Sea | Tor | | 459 | 28 14 33 37 | 2.2 | 4.2 | 2.2 | — | — | x | x | x | x | x | x | x | x | H | P | P | P | P | |
| | Hurghada | | 462 | 27 17 33 46 | 1.0 | 2.8 | 2.8 | 8 | 12 | x | x | x | x | x | x | x | x | H | P | P | P | P | |
| | Queir | | 465 | 26 08 34 18 | 8.0 | 11.3 | 11.3 | 12 | 15 | x | x | x | x | x | x | x | x | H | P | P | P | P | |

GENERAL SUMMARY OF WEATHER CONDITIONS

JANUARY 1964

Generally cold, particularly intense during the third week, rainy in the north with scattered thunderstorms. Early morning mist over scattered localities in Delta, Canal and Cairo Areas. Occasional widespread rising sand round the end of the month.

GENERAL DESCRIPTION OF WEATHER

The prevailing weather this month was cold in general and particularly during the period (18 - 21) when an intense cold wave prevailed. On the 18th the intense cold wave reached its peak causing a sudden fall of about 9°C in maximum temperature and dropping minimum temperature to 0°C or less in scattered localities in Western Desert and Upper Egypt districts.

Rain fell heavily over the northern parts of the Republic most days of the month, its monthly values exceeded its normal values over scattered parts of the Mediterranean coastal strip. The daily rainfall attained a record at Ras El Hikma.

It is worth to mention that weather was almost dusty round the end of the month in scattered localities in the northern and middle parts of the Republic particularly in the Western Desert district and the Mediterranean Coastal Strip. Early morning mist developed over the interior parts of Delta, Canal and Cairo areas many days during this month.

PRESSURE DISTRIBUTION

The prevailing outstanding pressure systems over the surface map this month can be summarized in the following:

— The subtropical high pressure belt extending from Central Atlantic and operating on West and South Europe, Mediterranean and North Africa Regions.

— The Siberian Anticyclonic sw ridge which operated over Black Sea and Asia Minor.

— The deep Polar low pressure system over north Atlantic and north Russia and their extension troughs over the Mediterranean and Middle East Regions.

— The Sudan Low and its northward elongation towards South East Mediterranean corner.

The Subtropical high pressure belt amalgamated with the south west ridge of the Siberian Anticyclone most days of the month with the exception of the short periods (2nd - 4th), (6th - 9th), (15th - 17th), (22nd - 25th) & (29 th - 31st) during which the amalgamation regime was interrupted and high pressure decayed appreciably over the Balkans and adjacent territories.

During the first four periods the deep polar low pressure system north of Russia showed a marked southward oscillation towards the Black and Caspian Seas regions causing a relative fall in the barometric

pressure over East Mediterranean, thus favouring the formation of Cyprus depression and the marked northward oscillation of the Sudan Low towards the Southeast Mediterranean.

During the last period, a deep low pressure system of the north Atlantic shot rapidly eastwards, it traversed Northwest Europe on the 28th causing appreciable fall in the barometric pressure over west Europe and west Mediterranean Regions, and favouring formation of a rather deep secondary depression over Tunisia. This Secondary depression proceeded rapidly eastwards following the motion of the primary system, passed by Central Mediterranean on the 30th and reached east Mediterranean on the 31st.

It is worth to mention that cyclogenesis in the middle latitudes, the Mediterranean Region and its vicinities was associated with the southward extension and relative deepening of the upper troughs of low pressure at the 700 & 500 mb levels.

The subtropical jet stream was evident during the whole month over the tropospheric maps round 210 mbs oscillating between latitude 25 & 35° north. The polar jet stream appeared in association with the deep upper cold low over East Mediterranean round the middle of the 2nd week at about 295 mb level, north of latitude 30° N.

The highest wind speeds recorded at Mersa Matruh, Helwan and Aswan were 162, 153 & 158 knots on the 12 th, 10th & 31sts respectively.

SURFACE WIND

The prevailing winds this month were generally light/moderate NWly. Winds veered to Ely and SEly far in advance of travelling secondary depressions and backed to Sly and SWly before their transits. Fresh / strong winds prevailed during and after secondary depression transits through the U.A.R, and mainly in the northern and middle parts. Calms were frequent most night and early morning intervals over most districts.

Gales were reported at- El kasr on the 31st; Ras El Teen on the 18th & 25th and at Port Said, Ghazza, Hurghada and Quseir on the 18th.

TEMPERATURE

Maximum temperature was generally subnormal with the exception of the period (29th — 31st) during which it exceeded its normal value. Its variability over the northern and middle parts of the Republic was slight during the 1st half of the month and rather large during the second half with a pronounced sharp drop round the 18th. Over the southern parts its variability was rather large in general.

The absolute maximum temperature for the Republic was 33.0 °C reported at Kom Ombo on the 31st.

Departure of minimum temperature from normal values was generally similar to departure of maximum temperature. Its variability was rather slight and round

normal over the western part of the Mediterranean coastal strip, moderate and subnormal elsewhere. As an exception minimum temperature rose rapidly above its normal between 29th & 31st and attained its higher monthly peak.

The absolute minimum temperature for the Republic was -3.0°C reported at Dakhla on the 1st.

PRECIPITATION

This month was generally rainy over the northern parts of the Republic where a prolonged rainy period was marked between

8th and 25th. Rain decreased gradually in land and at Cairo Area it fell only on the days 8th, 14th, 17th & 24th. The monthly rainfall exceeded its normal values over scattered localities in the northern parts. Rain was associated with scattered thunderstorms and lightning over the northern parts during the second week and on the 24th.

The absolute daily rainfall was 52.9 mms reported at Ras El Hikma on the 12th which is a record for January. The maximum monthly rainfall for the Republic was 173.9 mms reported at Sidi Barrani.

Cairo, 10-2-1970

M. F. TAHA

Under Secretary of State

Director General

Meteorological Department

**TABLE A 1. — MONTHLY VALUES OF THE ATMOSPHERIC PRESSURE, AIR TEMPERATURE,
RELATIVE HUMIDITY, BRIGHT SUNSHINE DURATION & PICHE EVAPORATION.**

JANUARY — 1964

| STATION | Atmospheric Pressure (mbs) M.S.L. | | Air Temperature °C | | | | | | | | Relative Humidity % | | Bright Sunshine Duration (Hours) | | | Piche Evap- (mm) Mean | |
|----------------------------|--------------------------------------|------------------------------|--------------------|------------------------------|-------------|------------------------------|----------|----------|------------------------------|----------|------------------------------|----|-------------------------------------|-------------------|-------|--------------------------------|------|
| | | | Maximum | | Minimum | | A+B 2 | Dry Bulb | | Wet Bulb | | | Total Actual | Total Possible | % | | |
| | Mean | D.F. Normal or Average | (A) Mean | D.F. Normal or Average | (B) Mean | D.F. Normal or Average | | Mean | D.F. Normal or Average | Mean | D.F. Normal or Average | | | | | | |
| Sailum | 1021.4 | +3.9 | 17.6 | -1.3 | 9.1 | +0.2 | 13.4 | 13.1 | -1.3 | 9.9 | -0.1 | 64 | + 9 | — | — | — | 5.8 |
| Mersa Matruh (A) | 1021.8 | +4.5 | 16.4 | -1.7 | 8.9 | +0.8 | 12.6 | 12.4 | -0.4 | 9.4 | -0.2 | 65 | 0 | 160.0 | 321.1 | 49.8 | 6.6 |
| Alexandria (A) | 1021.1 | +3.6 | 17.9 | -0.4 | 8.4 | -0.9 | 13.2 | 12.8 | -0.7 | 10.2 | -0.6 | 70 | - 1 | 161.8 | 322.3 | 50.2 | 3.9 |
| Port Said (A) | 1020.8 | +3.4 | 17.2 | -0.8 | 10.2 | -1.1 | 13.7 | 13.4 | -0.8 | 10.8 | -1.0 | 71 | - 2 | 181.1 | 322.2 | 56.2 | 5.7 |
| El Arish | 1021.2 | +3.7 | 17.7 | -1.6 | 7.6 | -0.7 | 12.6 | 12.1 | -2.0 | 9.7 | -1.6 | 72 | + 2 | 220.7 | 322.4 | 68.8 | 3.3 |
| Ghazza | 1020.9 | +2.5 | 16.3 | -1.8 | 8.1 | -1.3 | 12.2 | 12.0 | -1.8 | 9.3 | -2.0 | 68 | - 5 | 190.9 | 321.1 | 59.1 | 3.7 |
| Tanta | 1020.8 | — | 18.3 | — | 6.4 | — | 12.4 | 11.6 | — | 9.4 | — | 74 | — | 204.3 | 323.4 | 63.1 | 2.8 |
| Cairo (A) | 1021.1 | +3.1 | 17.9 | -1.2 | 7.8 | -0.8 | 12.8 | 12.7 | -1.0 | 8.9 | -1.1 | 57 | - 2 | — | — | — | 7.4 |
| Fayoum | 1021.5 | — | 18.4 | — | 5.6 | — | 12.0 | 11.7 | — | 8.5 | — | 62 | — | — | — | — | 3.1 |
| Minya (A) | 1021.6 | +3.0 | 18.7 | -1.9 | 2.6 | -1.5 | 10.6 | 10.2 | -1.6 | 7.5 | -0.5 | 66 | +10 | — | — | — | 4.6 |
| Assyout (A) | 1021.3 | +2.7 | 19.3 | -1.5 | 5.8 | -0.8 | 12.6 | 12.1 | -1.5 | 7.4 | -0.9 | 46 | + 3 | — | — | — | 6.8 |
| Luxor (A) | 1019.8 | +2.7 | 21.2 | -1.8 | 4.0 | -1.4 | 12.6 | 12.5 | -1.6 | 8.6 | -0.9 | 56 | + 4 | — | — | — | 3.6 |
| Aswan (A) | 1019.5 | +2.3 | 21.8 | -2.4 | 6.3 | -3.2 | 14.0 | 13.9 | -2.2 | 7.7 | -1.5 | 35 | + 1 | — | — | — | 11.2 |
| Siwa | 1021.8 | +3.0 | 18.1 | -1.6 | 4.5 | +0.4 | 11.3 | 11.2 | -0.6 | 7.3 | -0.4 | 53 | + 1 | — | — | — | 5.4 |
| Bahariya | 1022.0 | +3.3 | 18.9 | -1.0 | 4.0 | -0.7 | 11.4 | 11.6 | -1.3 | 7.2 | -1.5 | 48 | - 4 | — | — | — | 4.3 |
| Farafra | 1022.6 | — | 18.5 | — | 2.3 | — | 10.4 | 9.7 | — | 5.6 | — | 48 | — | — | — | — | 6.2 |
| Dakhla | 1019.7 | +2.0 | 20.2 | -1.2 | 1.2 | -3.2 | 10.7 | 10.6 | -2.0 | 5.8 | -1.3 | 42 | + 7 | — | — | — | 6.5 |
| Kharga | 1021.4 | — | 20.4 | — | 4.6 | — | 12.5 | 12.8 | — | 7.3 | — | 39 | — | 300.8 | 334.2 | 90.0 | 11.3 |
| Tor | 1019.6 | +2.4 | 19.9 | -1.4 | 7.9 | -0.9 | 13.9 | 14.1 | -1.8 | 9.1 | -2.5 | 47 | -11 | — | — | — | 5.6 |
| Hurgada | 1019.6 | +3.0 | 19.8 | -0.8 | 8.6 | -1.0 | 14.2 | 14.3 | -1.4 | 9.2 | -1.9 | 47 | - 7 | — | — | — | 12.5 |
| Quseir | 1019.1 | +2.8 | 20.3 | -2.4 | 12.5 | -1.3 | 16.4 | 16.4 | -2.4 | 11.2 | -2.0 | 48 | - 3 | — | — | — | 13.7 |

TABLE A2.— MAXIMUM AND MINIMUM AIR TEMPERATURES

JANUARY — 1964

| Station | Maximum Temperature °C | | | | | | | | | Gras Min. Temp. | | Minimum Temperature °C | | | | | | | | |
|-----------------------|------------------------|------|--------|------|----------------------------|-----|-----|-----|-----|-----------------|----------------|------------------------|------|--------|-------|-----------------------------|----|----|-----|--|
| | Highest | Date | Lowest | Date | No. of Days with Max-Temp. | | | | | Mean | D. From Normal | Highest | Date | Lowest | Date | No. of Days with Min. Temp. | | | | |
| | | | | | >25 | >30 | >35 | >40 | >45 | | | | | | | <10 | <5 | <0 | <-5 | |
| Sallum | 20.3 | 30 | 11.6 | 19 | 0 | 0 | 0 | 0 | 0 | 9.0 | — | 13.6 | 30 | 7.4 | 6 | 21 | 0 | 0 | 0 | |
| Marsa Matruh . (A) | 20.8 | 31 | 11.6 | 18 | 0 | 0 | 0 | 0 | 0 | — | — | 13.7 | 30 | 1.4 | 7 | 22 | 1 | 0 | 0 | |
| Alexandria . . . (A) | 20.9 | 31 | 13.3 | 19 | 0 | 0 | 0 | 0 | 0 | — | — | 12.6 | 31 | 4.5 | 3.19 | 21 | 3 | 0 | 0 | |
| Port. Said . . . (A) | 23.4 | 31 | 11.7 | 18 | 0 | 0 | 0 | 0 | 0 | 9.0 | — | 14.6 | 31 | 6.9 | 20 | 12 | 0 | 0 | 0 | |
| El Arish | 28.0 | 31 | 10.4 | 19 | 1 | 0 | 0 | 0 | 0 | 6.2 | — | 13.2 | 31 | 2.0 | 21 | 26 | 4 | 0 | 0 | |
| Ghazala | 22.7 | 31 | 9.0 | 19 | 0 | 0 | 0 | 0 | 0 | 8.4 | — | 16.6 | 31 | 1.7 | 21 | 26 | 3 | 0 | 0 | |
| Tanta | 24.3 | 31 | 12.2 | 18 | 0 | 0 | 0 | 0 | 0 | — | — | 11.8 | 31 | 1.6 | 19 | 28 | 7 | 0 | 0 | |
| Cairo (A) | 28.8 | 31 | 12.0 | 19 | 2 | 0 | 0 | 0 | 0 | — | — | 14.5 | 31 | 3.0 | 19 | 26 | 5 | 0 | 0 | |
| Fayoum | 26.6 | 30 | 12.8 | 18 | 1 | 0 | 0 | 0 | 0 | 3.3 | — | 13.3 | 31 | 1.4 | 19 | 29 | 13 | 0 | 0 | |
| Minya (A) | 25.6 | 31 | 12.8 | 18 | 2 | 0 | 0 | 0 | 0 | 1.2 | — | 10.9 | 31 | -0.6 | 27 | 30 | 27 | 2 | 0 | |
| Assyout (A) | 32.0 | 31 | 15.3 | 19 | 2 | 1 | 0 | 0 | 0 | 4.4 | — | 12.2 | 31 | 1.0 | 19 | 30 | 12 | 0 | 0 | |
| Luxor (A) | 32.0 | 31 | 17.4 | 19 | 2 | 1 | 0 | 0 | 0 | — | — | 10.8 | 31 | 0.0 | 21 | 30 | 20 | 0 | 0 | |
| Aswan (A) | 32.6 | 31 | 18.3 | 20 | 3 | 2 | 0 | 0 | 0 | — | — | 12.9 | 31 | 3.3 | 1 | 29 | 4 | 0 | 0 | |
| Siwa | 23.3 | 30 | 13.2 | 8 | 0 | 0 | 0 | 0 | 0 | 3.2 | — | 15.3 | 30 | 0.2 | 20.27 | 29 | 19 | 0 | 0 | |
| Bahariya | 27.9 | 30 | 12.0 | 19 | 1 | 0 | 0 | 0 | 0 | 3.2 | — | 12.9 | 30 | -1.2 | 19 | 29 | 20 | 1 | 0 | |
| Farafra | 28.9 | 30 | 12.2 | 19 | 1 | 0 | 0 | 0 | 0 | 1.8 | — | 7.9 | 31 | -1.9 | 13 | 31 | 24 | 4 | 0 | |
| Dakhla | 32.1 | 31 | 15.5 | 19 | 3 | 2 | 0 | 0 | 0 | -3.1 | — | 6.9 | 9 | -3.0 | 1 | 31 | 26 | 12 | 0 | |
| Kharga | 31.7 | 31 | 15.0 | 19 | 3 | 1 | 0 | 0 | 0 | 2.3 | — | 9.1 | 31 | 2.2 | 13 | 31 | 20 | 0 | 0 | |
| Tor | 28.8 | 31 | 16.2 | 19 | 1 | 0 | 0 | 0 | 0 | — | — | 14.4 | 31 | 3.5 | 21 | 25 | 2 | 0 | 0 | |
| Hurghada | 24.0 | 30 | 15.5 | 19 | 0 | 0 | 0 | 0 | 0 | — | — | 12.6 | 31 | 6.2 | 19 | 27 | 0 | 0 | 0 | |
| Quesir | 25.6 | 3 | 15.2 | 19 | 1 | 0 | 0 | 0 | 0 | — | — | 16.0 | 31 | 9.9 | 25 | 1 | 0 | 0 | 0 | |

TABLE A 3.—SKY COVER AND RAINFALL

JANURAY — 1964

| Station | Mean Sky Cover Oct, | | | | | Rainfall mms. | | | | | | | | | | |
|-------------------------|---------------------|------|------|------|-------|-----------------|----------------|-------------------------|----------|------------------------------------|------|------|------|-----|-----|-----|
| | 00 | 06 | 12 | 18 | Daily | Total Amount | D. From Normal | Max, Fall in one day | | Number of Days with Amount of Rain | | | | | | |
| | U.T. | U.T. | U.T. | U.T. | Mean | | | Amount | Date | <0.1 | ≥0.1 | >1.0 | >5.0 | >10 | >25 | >50 |
| Sallum | 4.8 | 4.7 | 6.0 | 4.7 | 4.9 | 67.5 | +51.9 | 16.0 | 22 | 0 | 15 | 13 | 3 | 1 | 0 | 0 |
| Mersa Matruh . . (A) | 4.5 | 5.3 | 5.3 | 4.4 | 5.0 | 72.3 | +45.2 | 20.1 | 9 | 5 | 17 | 12 | 5 | 2 | 0 | 0 |
| Alexandria (A) | 4.8 | 5.8 | 5.9 | 4.5 | 5.3 | 41.1 | — 7.2 | 10.7 | 24 | 5 | 13 | 11 | 3 | 1 | 0 | 0 |
| Port Said (A) | 2.9 | 4.1 | 3.9 | 3.0 | 3.6 | 13.7 | + 2.5 | 5.3 | 16 | 5 | 9 | 5 | 1 | 0 | 0 | 0 |
| El Arish | 4.0 | 4.3 | 4.4 | 4.4 | 3.2 | 21.8 | + 7.3 | 7.0 | 25 | 1 | 9 | 7 | 1 | 0 | 0 | 0 |
| Ghazza | 4.0 | 4.6 | 4.7 | 3.6 | 4.2 | 106.3 | +53.4 | 37.1 | 24 | 2 | 13 | 11 | 5 | 3 | 1 | 0 |
| Tanta | — | 2.6 | 3.7 | 1.6 | — | 5.6 | + 3.4 | 2.3 | 24 | 0 | 7 | 3 | 0 | 0 | 0 | 0 |
| Cairo (A) | 2.4 | 3.5 | 4.2 | 2.6 | 2.4 | 10.4 | + 6.7 | 7.2 | 14 | 3 | 5 | 3 | 1 | 0 | 0 | 0 |
| Weyoum | — | 2.2 | 2.8 | 1.1 | — | 0.0 | — 0.9 | 0.0 | — | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Minya (A) | 1.6 | 1.5 | 2.9 | 1.0 | 1.8 | Trace | — 0.5 | Trace | 31 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| Assiout (A) | 0.6 | 1.6 | 1.6 | 0.8 | 1.1 | 0.0 | — tr. | 0.0 | — | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Luxor (A) | 0.6 | 1.3 | 1.4 | 1.0 | 1.0 | 0.0 | — 0.0 | 0.0 | — | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Aswan (A) | 0.4 | 1.3 | 1.5 | 1.1 | 1.0 | 0.0 | — 0.1 | 0.0 | — | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Siwa | 1.6 | 2.7 | 3.9 | 2.5 | 2.6 | Trace | — 0.7 | Trace | 13,29,30 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| Bahariya | 1.7 | 1.9 | 3.2 | 1.4 | 2.0 | Trace | — 1.2 | Trace | 8 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| Farafra | 0.8 | 1.7 | 2.3 | 1.5 | 1.3 | 0.0 | — 0.0 | 0.0 | — | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Dakhla | 0.6 | 1.4 | 1.6 | 0.7 | 1.0 | 0.0 | — 0.0 | 0.0 | — | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Kharga | — | 1.6 | 1.9 | 0.7 | — | 0.0 | — 0.1 | 0.0 | — | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Tor | 0.5 | 1.6 | 1.9 | 1.2 | 1.3 | 0.0 | — 1.3 | 0.0 | — | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Hurghada | 1.0 | 1.8 | 2.3 | 1.6 | 1.7 | 0.0 | — 0.0 | 0.0 | — | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Quseir | 0.9 | 2.1 | 2.2 | 0.9 | 1.5 | 0.0 | — Tr. | 0.0 | — | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

TABLE A 4. — DAYS OF OCCURRENCE OF MISCELLANEOUS WEATHER PHENOMENA.

JANUARY 1964

| Station | Precipitation | | | | Frost | Thunderstorm, | Mist Vis \geq 1000 metres | Fog Vis $<$ 1000 Metres | Haze Vis \geq 1000 Metres | Thick Haze Vis $<$ 1000 Metres | Dust or Sandstorm, Vis \geq 1000 Metres | Dust or Sandstorm, Vis $<$ 1000 Metres | Gale | Clear Sky | Cloudy Sky |
|------------------|---------------|------|--------------|------|-------|---------------|-----------------------------|-------------------------|-----------------------------|--------------------------------|---|--|------|-----------|------------|
| | Rain | Snow | Ice, Pellets | Hail | | | | | | | | | | | |
| Sallum | 15 | 0 | 0 | 0 | — | 0 | 0 | 0 | 0 | 0 | 2 | 1 | 0 | 3 | 10 |
| Mersa-Matruh (A) | 18 | 0 | 0 | 0 | — | 2 | 0 | 0 | 0 | 0 | 4 | 2 | 0 | 0 | 9 |
| Alexandria (A) | 16 | 0 | 0 | 0 | — | 1 | 4 | 1 | 2 | 0 | 0 | 0 | 0 | 0 | 9 |
| Port Said (A) | 9 | 0 | 0 | 0 | — | 0 | 0 | 0 | 1 | 0 | 3 | 0 | 1 | 7 | 2 |
| El Arish | 9 | 0 | 0 | 0 | — | 0 | 3 | 0 | 3 | 0 | 4 | 0 | 0 | 8 | 6 |
| Ghazze | 15 | 0 | 0 | 1 | — | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 7 | 11 |
| Tanta | 7 | 0 | 0 | 0 | — | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | — | — |
| Cairo (A) | 5 | 0 | 0 | 0 | — | 0 | 6 | 1 | 18 | 0 | 2 | 0 | 0 | 11 | 3 |
| Fayoum | 0 | 0 | 0 | 0 | — | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | — | — |
| Minya (A) | 0 | 0 | 0 | 0 | — | 0 | 22 | 1 | 12 | 0 | 0 | 0 | 0 | 19 | 1 |
| Assyout (A) | 0 | 0 | 0 | 0 | — | 0 | 0 | 0 | 8 | 0 | 1 | 0 | 0 | 24 | 0 |
| Luxor (A) | 0 | 0 | 0 | 0 | — | 0 | 0 | 0 | 4 | 0 | 0 | 0 | 0 | 26 | 0 |
| Aswan (A) | 0 | 0 | 0 | 0 | — | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 25 | 0 |
| Siva | 0 | 0 | 0 | 0 | — | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 13 | 2 |
| Behariya | 0 | 0 | 0 | 0 | — | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 10 | 1 |
| Farafra | 0 | 0 | 0 | 0 | — | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | — | — |
| Dakhla | 0 | 0 | 0 | 0 | — | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 24 | 0 |
| Kharga | 0 | 0 | 0 | 0 | — | 0 | 0 | 0 | 0 | 0 | 4 | 1 | 0 | 27 | 0 |
| Tor | 0 | 0 | 0 | 0 | — | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 0 | 25 | 0 |
| Hurgada | 0 | 0 | 0 | 0 | — | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 21 | 0 |
| Quesir | 0 | 0 | 0 | 0 | — | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 1 | 22 | 2 |

**TABLE A 5.—NUMBER IN HOURS OF OCCURRENCES OF CONCURRENT SURFACE
WIND SPEED AND DIRECTION RECORDED WITHIN SPECIFIED RANGES**

JANUARY.—1964

| Station | calm (hours) | Variable (hours) | Unrecorded (hours) | Wind speed in knots | Number in hours of occurrences of wind blowing from the ranges of directions indicated | | | | | | | | | | | | | All directions |
|-------------------------|--------------|------------------|--------------------|--|---|--------------------------|--------------------------|--------------------------|---------------------------|----------------------------|--------------------------|--------------------------|---------------------------|---------------------------|--------------------------|---------------------------|-----------------------------|----------------|
| | | | | | 345 / 014 | 015 / 044 | 045 / 074 | 075 / 104 | 105 / 134 | 135 / 164 | 165 / 194 | 195 / 224 | 225 / 254 | 255 / 284 | 285 / 314 | 315 / 344 | | |
| Mersa Matruh . . (A) | 1 | 0 | 1 | 1-10 11-27 28-47 ≥ 48 All speeds | 28 42 0 0 70 | 45 45 2 0 92 | 11 6 0 0 17 | 11 0 0 0 11 | 19 5 0 0 24 | 24 10 1 0 35 | 41 14 1 0 56 | 48 10 0 0 58 | 73 45 0 0 118 | 67 75 0 0 142 | 29 31 0 0 60 | 32 27 0 0 59 | 428 310 4 0 742 | |
| Alexandria. (A) | 41 | 0 | 0 | 1-10 11-27 28-47 ≥ 48 All speeds | 5 3 0 0 8 | 19 3 0 0 22 | 29 1 0 0 30 | 48 9 0 0 57 | 61 7 0 0 68 | 65 0 0 0 65 | 36 0 0 0 36 | 72 0 0 0 72 | 52 28 0 0 80 | 27 24 0 0 51 | 35 4 0 0 43 | 94 70 0 0 164 | 543 160 0 0 703 | |
| Port Said. (A) | 0 | 2 | 3 | 1-10 11-27 28-47 ≥ 48 All speeds | 12 5 0 0 17 | 14 15 0 0 29 | 34 25 0 0 59 | 30 42 0 0 72 | 24 9 0 0 33 | 41 10 0 0 51 | 41 10 0 0 51 | 31 13 0 0 44 | 73 55 0 0 128 | 92 60 0 0 142 | 21 12 0 0 33 | 41 31 8 0 80 | 404 287 8 0 739 | |
| El Arish | 5 | 0 | 0 | 1-10 11-27 28-47 ≥ 48 All speeds | 10 0 0 0 10 | 28 4 0 0 32 | 22 0 0 0 22 | 29 5 0 0 34 | 74 3 0 0 77 | 153 1 0 0 154 | 59 1 0 0 60 | 72 0 0 0 72 | 122 9 0 0 131 | 42 23 0 0 65 | 29 11 0 0 40 | 34 8 0 0 42 | 674 65 0 0 739 | |
| Matruh. | 0 | 0 | 0 | 1-10 11-27 28-47 ≥ 48 All speeds | 0 0 0 0 0 | 15 0 0 0 15 | 27 1 0 0 28 | 55 4 0 0 59 | 89 13 0 0 102 | 153 66 0 0 219 | 57 12 0 0 69 | 22 16 0 0 38 | 21 39 0 0 60 | 9 10 0 0 19 | 6 7 8 0 19 | 95 21 0 0 116 | 549 189 6 0 744 | |
| Santa | 116 | 0 | 0 | 1-10 11-27 28-47 ≥ 48 All speeds | 22 0 0 0 22 | 41 0 0 0 41 | 48 0 0 0 48 | 38 1 0 0 39 | 45 0 0 0 45 | 13 0 0 0 13 | 15 0 0 0 15 | 55 0 0 0 55 | 131 3 0 0 134 | 53 6 0 0 59 | 63 1 0 0 64 | 92 11 0 0 93 | 606 22 0 0 628 | |
| Suez. (A) | 34 | 0 | 238 | 1-10 11-27 28-47 ≥ 48 All speeds | 3 1 0 0 4 | 30 8 0 0 38 | 53 24 0 0 77 | 5 4 0 0 6 | 22 4 0 0 26 | 24 26 0 0 50 | 6 6 0 0 12 | 66 9 0 0 75 | 24 13 0 0 37 | 34 6 0 0 40 | 28 11 0 0 39 | 54 14 0 0 68 | 349 123 0 0 472 | |

**TABLE A 5 (contd.)—NUMBER IN HOURS OF OCCURRENCES OF CONCURRENT SURFACE
WIND SPEED AND DIRECTION RECORDED WITHIN SPECIFIED RANGES**

JANUARY—1964

| Station | calm (hours) | variable (hours) | unrecorded (hours) | Wind speed in knots | Number in hours of occurrences of wind blowing from the ranges of direction indicated | | | | | | | | | | | | | All directions |
|---------------------|--------------|------------------|--------------------|--|--|----------------------------|-------------------------|-------------------------|--------------------------|---------------------------|-------------------------|-------------------------|--------------------------|-----------------------------|----------------------------|----------------------------|------------------------------|----------------|
| | | | | | 345 | 015 | 045 | 075 | 105 | 135 | 156 | 195 | 225 | 255 | 285 | 315 | | |
| | | | | | / 014 | / 044 | / 074 | / 104 | / 134 | / 164 | / 194 | / 224 | / 254 | / 284 | / 314 | / 344 | | |
| Fayoum | 127 | 0 | 0 | 1-10 11-27 28-47 ≥ 48 All speeds | 31 1 0 0 32 | 54 6 0 0 60 | 16 0 0 0 16 | 0 0 0 0 0 | 7 0 0 0 7 | 73 0 0 0 73 | 16 0 0 0 16 | 66 0 0 0 66 | 37 0 0 0 37 | 64 0 0 0 64 | 54 0 0 0 54 | 183 9 0 0 192 | 601 16 0 0 617 | |
| Minya (A) | 70 | 0 | 0 | 1-10 11-27 28-47 ≥ 48 All speeds | 38 11 0 0 49 | 63 41 0 0 104 | 12 1 0 0 13 | 0 0 0 0 0 | 16 0 0 0 16 | 87 4 0 0 91 | 20 0 0 0 20 | 11 0 0 0 11 | 7 0 0 0 7 | 25 2 0 0 27 | 38 1 0 0 39 | 268 29 0 0 297 | 585 89 0 0 674 | |
| Luxor (A) | 33 | 0 | 2 | 1-10 11-27 28-47 ≥ 48 All speeds | 8 0 0 0 8 | 87 1 0 0 88 | 72 0 0 0 72 | 1 0 0 0 1 | 24 0 0 0 24 | 108 4 0 0 112 | 25 1 0 0 26 | 63 0 0 0 63 | 41 1 0 0 42 | 25 0 0 0 25 | 41 1 0 0 42 | 180 26 0 0 206 | 675 34 0 0 709 | |
| Aswan (A) | 2 | 0 | 10 | 1-10 11-27 28-47 ≥ 48 All speeds | 114 38 0 0 152 | 183 54 0 0 237 | 26 1 0 0 27 | 0 0 0 0 0 | 3 2 0 0 5 | 7 0 0 0 7 | 4 0 0 0 4 | 4 0 0 0 4 | 0 0 0 0 0 | 4 0 0 0 4 | 13 12 0 0 25 | 169 98 0 0 267 | 527 205 0 0 732 | |
| Siwa. | 163 | 0 | 0 | 1-10 11-27 28-47 ≥ 48 All speeds | 4 0 0 0 4 | 15 2 0 0 17 | 35 9 0 0 44 | 31 1 0 0 32 | 64 12 0 0 76 | 41 6 0 0 47 | 18 3 0 0 21 | 17 2 0 0 19 | 39 10 0 0 49 | 126 13 0 0 139 | 68 7 0 0 75 | 56 2 0 0 58 | 514 67 0 0 581 | |
| Dakhia. | 40 | 0 | 0 | 1-10 11-27 28-47 ≥ 48 All speeds | 25 0 0 0 25 | 84 2 0 0 86 | 65 0 0 0 65 | 2 0 0 0 2 | 28 0 0 0 28 | 38 0 0 0 38 | 7 0 0 0 7 | 28 0 0 0 28 | 30 1 0 0 31 | 90 1 0 0 91 | 114 3 0 0 117 | 184 2 0 0 186 | 695 9 0 0 704 | |
| Hurghada. | 6 | 0 | 0 | 1-10 11-27 28-47 ≥ 48 All speeds | 30 43 0 0 73 | 18 0 0 0 18 | 2 0 0 0 2 | 1 0 0 0 1 | 10 5 0 0 15 | 8 2 0 0 10 | 2 0 0 0 2 | 2 0 0 0 2 | 16 0 0 0 16 | 113 170 0 0 283 | 42 114 7 0 163 | 34 114 5 0 153 | 278 448 12 0 738 | |
| Quseir. | 0 | 0 | 0 | 1-10 11-27 28-47 ≥ 48 All speeds | 118 22 0 0 140 | 23 0 0 0 23 | 2 0 0 0 2 | 0 0 0 0 0 | 3 0 0 0 3 | 4 0 0 0 4 | 2 0 0 0 2 | 0 0 0 0 0 | 6 22 0 0 28 | 215 26 0 0 241 | 71 105 0 0 176 | 31 91 3 0 125 | 475 266 3 0 744 | |

TABLE B 1.—UPPER AIR CLIMATOLOGICAL DATA

JANUARY—1964

| Station | Pressure Surface (Millibar) | Altitude of Pressure Surface (gpm) | | | | Temperature (°C) | | | | Dew Point (°C) | |
|----------------------|-----------------------------|------------------------------------|----------|----------|----------|------------------|--------|---------|--------|----------------|-------|
| | | N | Mean | Highest | Lowest | N | Mean | Highest | Lowest | N | Mean |
| Mersa Matruh 0000 UT | Surface | 31 | * | * | * | 31 | 11.4 | 15.0 | 7.7 | 31 | 7.0 |
| | 1000 | 31 | 1018m.b. | 1026m.b. | 1006m.b. | 31 | 11.3 | 15.6 | 7.1 | 31 | 6.5 |
| | 850 | 31 | 194 | 260 | 96 | 31 | 2.8 | 15.6 | — 3.8 | 30 | — 1.9 |
| | 700 | 31 | 1533 | 1593 | 1496 | 31 | — 4.9 | 2.1 | —11.3 | 24 | —11.0 |
| | 600 | 31 | 3084 | 3130 | 3025 | 31 | — 12.5 | — 6.6 | —18.1 | 19 | —21.6 |
| | 500 | 31 | 4280 | 4348 | 4197 | 31 | — 21.6 | —16.9 | —28.4 | 18 | —26.2 |
| | 400 | 31 | 5648 | 5748 | 5539 | 31 | — 32.9 | —27.9 | —39.7 | 10 | —36.3 |
| | 300 | 31 | 7249 | 7388 | 7111 | 31 | — 45.2 | —39.0 | —52.0 | — | — |
| | 200 | 29 | 9224 | 9379 | 9030 | 29 | — 56.9 | —48.9 | —63.6 | — | — |
| | 150 | 29 | 11954 | 11980 | 11660 | 29 | — 59.3 | —55.5 | —65.6 | — | — |
| | 100 | 23 | 13683 | 13797 | 13492 | 23 | — 64.8 | —59.0 | —70.5 | — | — |
| | 70 | 7 | 16195 | 16292 | 16102 | 7 | — 64.8 | —62.0 | —67.2 | — | — |
| | 50 | 6 | 18357 | 18460 | 18300 | 6 | — 63.8 | —59.4 | —65.9 | — | — |
| | 30 | — | 20412 | 20505 | 20354 | — | — | — | — | — | — |
| | 20 | — | — | — | — | — | — | — | — | — | — |
| | 10 | — | — | — | — | — | — | — | — | — | — |
| Helwan 0000 UT | Surface | 29 | * | * | * | 29 | 9.3 | 15.2 | 4.6 | 29 | 2.6 |
| | 1000 | 29 | 1004m.b. | 1011m.b. | 995m.b. | 25 | 9.6 | 15.4 | 6.8 | 25 | 2.4 |
| | 850 | 29 | 176 | 230 | 100 | 29 | 3.7 | 17.6 | — 2.7 | 29 | — 2.6 |
| | 700 | 29 | 1518 | 1559 | 1461 | 29 | — 2.8 | 5.8 | — 9.3 | 19 | —13.1 |
| | 600 | 29 | 3078 | 3146 | 3026 | 29 | — 10.2 | — 4.7 | —17.5 | 8 | —16.1 |
| | 500 | 29 | 4290 | 4559 | 4201 | 29 | —18.6 | —14.2 | —25.0 | 7 | —23.9 |
| | 400 | 29 | 5666 | 5775 | 5554 | 29 | — 30.1 | —25.7 | —38.3 | 7 | —32.2 |
| | 300 | 29 | 7290 | 7417 | 7162 | 29 | — 43.5 | —37.0 | —48.3 | — | — |
| | 200 | 29 | 9280 | 9425 | 9120 | 29 | — 54.0 | —48.9 | —59.8 | — | — |
| | 150 | 28 | 11933 | 12044 | 11743 | 28 | — 59.7 | —55.1 | —65.2 | — | — |
| | 100 | 26 | 13753 | 13847 | 13616 | 26 | — 66.2 | —61.0 | —70.3 | — | — |
| | 70 | 23 | 16247 | 16363 | 16146 | 23 | — 65.5 | —61.0 | —71.3 | — | — |
| | 50 | 18 | 18291 | 18490 | 18210 | 18 | — 62.2 | —59.6 | —65.8 | — | — |
| | 30 | 7 | 20466 | 20577 | 20330 | 7 | — 55.0 | —48.7 | —67.8 | — | — |
| | 20 | 6 | 23666 | 23836 | 23436 | 6 | — 46.5 | —41.4 | —50.8 | — | — |
| | 10 | 2 | 26353 | 26521 | 26249 | 2 | — 41.8 | —39.8 | —43.9 | — | — |
| Aswan. 0000 UT | Surface | 31 | * | * | * | 31 | 9.3 | 19.0 | 6.5 | 31 | —1.2 |
| | 1000 | — | 996m.b. | 1000m.b. | 988m.b. | — | — | — | — | — | — |
| | 850 | 31 | — | — | — | 31 | 7.3 | 18.2 | 1.7 | 17 | — 6.4 |
| | 700 | 31 | 1499 | 1527 | 1438 | 31 | 2.1 | 9.2 | — 3.0 | 4 | —13.6 |
| | 600 | 31 | 3082 | 3146 | 3007 | 31 | — 4.8 | 1.5 | — 9.4 | 7 | —10.9 |
| | 500 | 31 | 4312 | 4400 | 4225 | 31 | —13.4 | — 8.2 | —17.7 | 4 | —20.1 |
| | 400 | 31 | 5754 | 5824 | 5624 | 31 | — 25.1 | —18.4 | —30.8 | 8 | —35.7 |
| | 300 | 31 | 7387 | 7526 | 7291 | 31 | — 39.1 | —29.4 | —45.4 | 3 | —42.9 |
| | 200 | 31 | 9420 | 9631 | 9289 | 31 | — 55.0 | —48.3 | —60.6 | — | — |
| | 150 | 30 | 12102 | 12416 | 11927 | 30 | — 64.1 | —52.9 | —69.3 | — | — |
| | 100 | 25 | 13995 | 14255 | 13694 | 25 | — 75.4 | —67.5 | —81.4 | — | — |
| | 70 | 10 | 16333 | 16749 | 16030 | 10 | — 72.5 | —67.6 | —78.7 | — | — |
| | 50 | 10 | 18399 | 18540 | 18260 | 10 | — 65.4 | —59.0 | —70.8 | — | — |
| | 30 | 3 | 20384 | 20517 | 20277 | 3 | — 60.4 | —56.9 | —67.2 | — | — |
| | 20 | — | 23498 | 23533 | 23474 | — | — | — | — | — | — |
| | 10 | — | — | — | — | — | — | — | — | — | — |

N = The number of cases the element has been observed during the month.

* The atmospheric pressure corrected to the elevation of the radiosonde stations.

TABLE B 1 (contd.).—UPPER AIR CLIMATOLOGICAL DATA

JANUARY—1964

| Station | Pressure Surface Millibar | Altitude of Pressure Surface (gpm) | | | | Temperature (°C) | | | | Dew Point (°C) | |
|------------------------|---------------------------------|------------------------------------|---------------|---------------|---------------|------------------|-------|---------|--------|----------------|-------|
| | | N | Mean | Highest | Lowest | N | Mean | Highest | Lowest | N | Mean |
| Mersa Matruh 1200 U.T. | Surface | 31 | * 1017m.b. | * 1025m.b. | * 1005m.b. | 31 | 15.4 | 18.6 | 9.8 | 31 | 8.1 |
| | 1000 | 31 | 189 | 254 | 88 | 31 | 14.0 | 19.3 | 8.2 | 31 | 6.9 |
| | 850 | 31 | 1536 | 1586 | 1449 | 31 | 3.4 | 14.1 | — 4.1 | 31 | — 2.3 |
| | 700 | 31 | 3085 | 3142 | 3020 | 31 | — 3.7 | 2.5 | —11.0 | 31 | —11.4 |
| | 600 | 31 | 4285 | 4364 | 4195 | 31 | —11.5 | — 6.5 | —18.1 | 18 | —19.1 |
| | 500 | 31 | 5655 | 5766 | 5535 | 31 | —21.3 | —15.2 | —27.5 | 10 | —25.3 |
| | 400 | 31 | 7264 | 7411 | 7105 | 31 | —31.9 | —27.8 | —39.0 | 8 | —36.2 |
| | 300 | 31 | 9247 | 9383 | 9041 | 31 | —44.9 | —40.9 | —49.3 | — | — |
| | 200 | 30 | 11794 | 12004 | 11712 | 30 | —54.5 | —49.1 | —62.7 | — | — |
| | 150 | 28 | 13716 | 13829 | 13562 | 28 | —57.4 | —50.7 | —63.4 | — | — |
| | 100 | 27 | 16239 | 16304 | 16103 | 27 | —63.7 | —59.3 | —66.6 | — | — |
| | 70 | 17 | 18416 | 18490 | 18300 | 17 | —63.8 | —60.2 | —67.8 | — | — |
| | 50 | 10 | 20517 | 20585 | 20405 | 10 | —61.7 | —55.5 | —67.2 | — | — |
| | 30 | — | — | — | — | — | — | — | — | — | — |
| | 20 | — | — | — | — | — | — | — | — | — | — |
| | 10 | — | — | — | — | — | — | — | — | — | — |
| Helwan 1200 U.T. | Surface | 31 | * 1003m.b. | * 1011m.b. | * 991m.b. | 31 | 16.7 | 28.0 | 10.4 | 31 | 3.4 |
| | 1000 | 31 | 171 | 232 | 68 | 26 | 15.4 | 21.8 | 9.6 | 26 | 3.2 |
| | 850 | 31 | 1520 | 1559 | 1452 | 31 | 3.9 | 17.9 | — 4.0 | 31 | — 4.5 |
| | 700 | 31 | 3077 | 3141 | 3011 | 31 | — 3.1 | 4.0 | — 9.3 | 17 | —12.7 |
| | 600 | 31 | 4282 | 4377 | 4203 | 31 | — 9.7 | — 5.0 | —15.1 | 9 | —19.1 |
| | 500 | 31 | 5666 | 5785 | 5564 | 31 | —18.8 | —13.0 | —24.6 | 10 | —25.2 |
| | 400 | 31 | 7294 | 7437 | 7157 | 31 | —29.8 | —25.6 | —37.5 | 8 | —35.1 |
| | 300 | 31 | 9290 | 9448 | 9128 | 31 | —42.7 | —39.3 | —49.2 | — | — |
| | 200 | 30 | 11949 | 12068 | 11813 | 30 | —53.8 | —48.2 | —58.8 | — | — |
| | 150 | 30 | 13775 | 13888 | 13626 | 30 | —59.0 | —53.6 | —67.5 | — | — |
| | 100 | 28 | 16280 | 16432 | 16084 | 28 | —65.5 | —59.5 | —70.3 | — | — |
| | 70 | 25 | 18439 | 18570 | 18240 | 25 | —64.6 | —60.7 | —68.2 | — | — |
| | 50 | 19 | 20512 | 20600 | 20283 | 19 | —61.6 | —56.3 | —66.5 | — | — |
| | 30 | 14 | 23767 | 23964 | 23579 | 14 | —54.4 | —48.6 | —66.1 | — | — |
| | 20 | 7 | 26385 | 26560 | 26053 | 7 | —49.7 | —42.0 | —64.3 | — | — |
| | 10 | — | — | — | — | — | — | — | — | — | — |
| Aswar 1200 U.T. | Surface | 31 | * 995m.b. | * 999m.b. | * 987m.b. | 31 | 21.2 | 31.0 | 17.2 | 31 | 3.3 |
| | 1000 | — | — | — | — | — | — | — | — | — | — |
| | 850 | 31 | 1519 | 1555 | 1463 | 31 | 10.3 | 16.8 | 3.9 | 17 | — 8.1 |
| | 700 | 31 | 3119 | 3191 | 3051 | 31 | 5.1 | 11.6 | — 3.2 | 5 | — 5.9 |
| | 600 | 31 | 4363 | 4462 | 4282 | 31 | — 2.0 | 5.9 | — 7.0 | — | — |
| | 500 | 31 | 5784 | 5930 | 5626 | 31 | —11.2 | — 1.2 | —16.5 | 5 | —13.8 |
| | 400 | 31 | 7464 | 7667 | 7305 | 31 | —22.2 | —13.4 | —26.4 | 2 | —31.8 |
| | 300 | 31 | 9521 | 9758 | 9358 | 31 | —36.9 | —27.5 | —42.0 | 3 | —20.0 |
| | 200 | 29 | 12227 | 12608 | 12047 | 29 | —53.2 | —41.5 | —60.3 | — | — |
| | 150 | 28 | 14076 | 14520 | 13846 | 28 | —62.9 | —50.9 | —68.7 | — | — |
| | 100 | 24 | 16459 | 16768 | 16280 | 24 | —70.5 | —67.3 | —81.2 | — | — |
| | 70 | 11 | 18554 | 18700 | 18390 | 11 | —70.8 | —68.1 | —76.3 | — | — |
| | 50 | 6 | 20670 | 20701 | 20430 | 6 | —63.8 | —61.1 | —66.2 | — | — |
| | 30 | 2 | 23790 | 23903 | 23677 | 2 | —53.6 | —51.1 | —56.0 | — | — |
| | 20 | — | — | — | — | — | — | — | — | — | — |
| | 10 | — | — | — | — | — | — | — | — | — | — |

N = The number of cases the element has been observed during the month.

* The atmospheric pressure corrected to the elevation of the radiosonde stations.

**TABLE B 2.—MEAN AND EXTREME VALUES OF THE FREEZING LEVEL AND THE TROPOPAUSE ;
THE HIGHEST WIND SPEED IN THE UPPER AIR**

JANUARY—1964

| Station | Freezing Level | | | | | | | | | First Tropopause | | | | | | | | | Highest wind speed | | | | |
|-------------|-----------------|----------------|----------------|----------------|----------------|----------------|-----------------|----------------|----------------|------------------|----------------|------------------|-----------------|----------------|------------------|-----------------|----------------|------------------|--------------------|----------------|----------------------|----------------|-----|
| | Mean | | | Highest | | | Lowest | | | Mean | | | Highest | | | Lowest | | | Altitude (g pm) | Pressure (mb.) | Direction (000-360)° | Speed in Knots | |
| | Altitude (gpm) | Pressure (mb.) | Dew point (°C) | Altitude (gpm) | Pressure (mb.) | Dew Point (°C) | Altitude (g pm) | Pressure (mb.) | Dew Point (°C) | Altitude (gpm) | pressure (mb.) | Temperature (°C) | Altitude (g pm) | Pressure (mb.) | Temperature (°C) | Altitude (g pm) | Pressure (mb.) | Temperature (°C) | | | | | |
| 0000 U.T. | M. Matruh . . . | (N) | (N) | (N) | | | | | | | | | | | | | | | | | | | |
| | 2035 (31) | 801 (31) | -4.2 (30) | 3370 | 678 | -3.0 | 1060 | 904 | -4.3 | 10806 (25) | 241 (25) | -54.8 (25) | 13940 | 145 | -64.3 | 8170 | 345 | -42.0 | 15500 | 110 | 260 | 137 | |
| | Helwan . . . | 2271 (29) | 777 (29) | -6.4 (25) | 3800 | 644 | -11.8 | 1130 | 897 | -4.4 | 12008 (27) | 207 (27) | -58.4 (27) | 15780 | 108 | -68.4 | 7680 | 370 | -41.4 | 9900 | 268 | 270 | 153 |
| Aswan . . . | 3449 (31) | 671 (31) | -14.2 (7) | 4600 | 583 | -8.6 | 1900 | 805 | -14.7 | 14453 (21) | 149 (21) | -66.7 (21) | 16466 | 100 | -74.1 | 11730 | 208 | -57.0 | 13300 | 168 | 240 | 156 | |
| 1200 U.T. | M. Matruh . . . | (N) | (N) | (N) | | | | | | | | | | | | | | | | | | | |
| | 2096 (31) | 763 (31) | -1.0 (31) | 3430 | 674 | -6.9 | 1450 | 862 | -2.6 | 10380 (28) | 244 (28) | -54.4 (28) | 12470 | 182 | -57.3 | 8270 | 339 | -48.2 | 9900 | 272 | 250 | 162 | |
| | Helwan . . . | 2181 (31) | 784 (31) | -8.0 (31) | 3700 | 653 | -10.2 | 1100 | 896 | -5.3 | 11778 (30) | 210 (30) | -56.2 (30) | 16342 | 100 | -67.5 | 9050 | 305 | -45.1 | 9100 | 308 | 240 | 152 |
| Aswan . . . | 3099 (31) | 626 (31) | -14.6 (5) | 5540 | 526 | — | 2680 | 735 | -13.2 | 13641 (17) | 133 (17) | -64.8 (17) | 16552 | 100 | -72.8 | 11350 | 212 | -51.7 | 13890 | 168 | 260 | 158 | |

N = The number of cases the element has been observed during the month.

TABLE B 3.—NUMBER OF OCCURRENCES OF WIND DIRECTION WITHIN SPECIFIED RANGES AND THE MEAN SCALAR WIND SPEED AT THE STANDARD AND SELECTED PRESSURE SURFACES.

MERSA MATRUH (A)—JANUARY 1964

| Time | Pressure Surface Millibar | Wind between ranges of direction (000-360)° | | | | | | | | | | | | | | | | | | | | Number of calm wind | Total number of observations (TN) | Mean scalar wind speed (knots) | | | | |
|-----------|------------------------------|---|-----------|-----|-----------|-----|-----------|-----|-----------|-----|-----------|-----|-----------|-----|-----------|-----|-----------|-----|-----------|-----|-----------|------------------------|--------------------------------------|-----------------------------------|-----------|---|-----|----|
| | | 345 | | 015 | | 075 | | 075 | | 105 | | 135 | | 165 | | 195 | | 225 | | 255 | | | | | 285 | | 315 | |
| | | / | | / | | / | | / | | / | | / | | / | | / | | / | | / | | | | | / | | / | |
| | | 014 | | 044 | | 074 | | 104 | | 134 | | 164 | | 194 | | 224 | | 254 | | 284 | | | | | 314 | | 344 | |
| | | N | (ff) m | N | (ff) m | N | (ff) m | N | (ff) m | N | (ff) m | N | (ff) m | N | (ff) m | N | (ff) m | N | (ff) m | N | (ff) m | N | (ff) m | N | (ff) m | | | |
| 0000 U.T. | Surface | 1 | 15 | 4 | 14 | 0 | — | 0 | — | 2 | 7 | 2 | 5 | 1 | 28 | 4 | 7 | 6 | 9 | 7 | 11 | 1 | 9 | 3 | 10 | 0 | 31 | 10 |
| | 1000 | 1 | 13 | 4 | 13 | 0 | — | 0 | — | 2 | 7 | 2 | 5 | 1 | 28 | 4 | 7 | 6 | 10 | 6 | 12 | 1 | 9 | 4 | 10 | 0 | 31 | 10 |
| | 850 | 3 | 12 | 3 | 17 | 0 | — | 0 | — | 0 | — | 1 | 3 | 2 | 12 | 2 | 24 | 5 | 9 | 3 | 15 | 7 | 13 | 4 | 18 | 1 | 31 | 13 |
| | 700 | 1 | 4 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 2 | 8 | 2 | 38 | 3 | 30 | 12 | 26 | 5 | 19 | 4 | 17 | 2 | 31 | 21 |
| | 600 | 2 | 4 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 3 | 54 | 5 | 23 | 13 | 34 | 6 | 28 | 2 | 22 | 0 | 0 | 0 | 31 | 31 |
| | 500 | 1 | 11 | 0 | — | 0 | — | 1 | 15 | 0 | — | 0 | — | 1 | 32 | 4 | 45 | 16 | 47 | 5 | 42 | 1 | 6 | 0 | 0 | 0 | 29 | 41 |
| | 400 | 1 | 10 | 0 | — | 0 | — | 0 | — | 0 | — | 1 | 12 | 1 | 65 | 0 | — | 3 | 41 | 18 | 54 | 2 | 53 | 0 | — | 0 | 28 | 49 |
| | 300 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 4 | 62 | 10 | 54 | 1 | 36 | 0 | — | 0 | — | 0 | 15 | 55 |
| | 200 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 1 | 58 | 7 | 86 | 0 | — | 0 | — | 0 | — | 0 | 8 | 82 |
| | 150 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 4 | 89 | 0 | — | 0 | — | 0 | — | 0 | 4 | 89 |
| | 100 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| | 70 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| | 50 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| | 30 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| | 20 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| | 10 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| 1200 U.T. | Surface | 4 | 11 | 2 | 10 | 1 | 2 | 2 | 12 | 2 | 6 | 1 | 20 | 1 | 1 | 3 | 10 | 3 | 10 | 5 | 19 | 2 | 17 | 5 | 9 | 0 | 31 | 11 |
| | 1000 | 4 | 11 | 2 | 10 | 0 | — | 2 | 12 | 2 | 6 | 2 | 14 | 1 | 1 | 3 | 10 | 3 | 10 | 5 | 19 | 2 | 17 | 5 | 9 | 0 | 31 | 12 |
| | 850 | 5 | 17 | 1 | 10 | 1 | 10 | 0 | — | 1 | 5 | 1 | 8 | 1 | 15 | 5 | 18 | 1 | 28 | 6 | 18 | 5 | 15 | 4 | 8 | 0 | 31 | 15 |
| | 700 | 1 | 12 | 0 | — | 0 | — | 1 | 8 | 0 | — | 0 | — | 1 | 21 | 1 | 11 | 6 | 28 | 6 | 27 | 10 | 17 | 4 | 25 | 0 | 30 | 22 |
| | 600 | 0 | — | 0 | — | 1 | 4 | 0 | — | 0 | — | 1 | 2 | 0 | — | 2 | 36 | 6 | 33 | 13 | 39 | 6 | 31 | 1 | 9 | 0 | 30 | 32 |
| | 500 | 1 | 8 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 2 | 19 | 4 | 42 | 13 | 54 | 7 | 39 | 2 | 12 | 0 | 29 | 42 |
| | 400 | 0 | — | 0 | — | 1 | 19 | 0 | — | 0 | — | 0 | — | 0 | — | 1 | 34 | 5 | 56 | 13 | 58 | 5 | 69 | 0 | — | 0 | 25 | 57 |
| | 300 | 0 | — | 1 | 18 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 4 | 77 | 9 | 65 | 1 | 114 | 0 | — | 0 | — | 0 | 15 | 68 |
| | 200 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 3 | 64 | 4 | 66 | 0 | — | 0 | — | 0 | — | 0 | 7 | 65 |
| | 150 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 1 | 97 | 2 | 61 | 0 | — | 0 | — | 0 | — | 0 | 3 | 73 |
| | 100 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 2 | 40 | 0 | — | 0 | — | 0 | — | 0 | 2 | 40 |
| | 70 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| | 50 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| | 30 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| | 20 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| | 10 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |

N = The number of cases the element has been observed during the month.

TN = The total number of cases the wind has been observed for all directions during the month.

TABLE B 3 (contd.)—NUMBER OF OCCURRENCES OF WIND DIRECTION WITHIN SPECIFIED RANGES AND THE MEAN SCALAR WIND SPEED AT THE STANDARD AND SELECTED PRESSURE SURFACES.

HELWAN—JANUARY 1964

| Time | Pressure Surface (Millibar.) | Wind between ranges of direction (000—360)° | | | | | | | | | | | | | | | | | | | | Number of Calm winds | Total Number of Observations (TN) | Mean Scalar wind Speed (Knots) | | | | |
|-----------|---------------------------------|---|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|------|------|------|------|------|------|------|------|-------------------------|--------------------------------------|-----------------------------------|------|------|------|------|
| | | 345 | | 015 | | 045 | | 075 | | 105 | | 135 | | 165 | | 195 | | 225 | | 255 | | | | | 285 | | 315 | |
| | | 014 | 044 | 074 | 104 | 134 | 164 | 194 | 224 | 254 | 284 | 314 | 344 | (ff) | (ff) | (ff) | (ff) | (ff) | (ff) | (ff) | (ff) | | | | (ff) | (ff) | (ff) | (ff) |
| | | N | m | N | m | N | m | N | m | N | m | N | m | N | m | N | m | N | m | N | m | N | m | N | m | N | m | |
| 0000 U.T. | Surface | 3 | 9 | 5 | 8 | 4 | 14 | 1 | 8 | 1 | 7 | 0 | — | 1 | 5 | 0 | — | 0 | — | 0 | — | 1 | 15 | 2 | 8 | 11 | 29 | 6 |
| | 1000 | 4 | 10 | 4 | 8 | 5 | 13 | 1 | 2 | 0 | — | 0 | — | 1 | 5 | 0 | — | 0 | — | 0 | — | 1 | 5 | 3 | 7 | 6 | 25 | 7 |
| | 850 | 8 | 15 | 4 | 11 | 2 | 18 | 0 | — | 0 | — | 0 | — | 1 | 10 | 3 | 17 | 0 | — | 5 | 13 | 3 | 13 | 3 | 10 | 0 | 29 | 13 |
| | 700 | 1 | 14 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 3 | 29 | 7 | 19 | 13 | 22 | 5 | 29 | 0 | 29 | 23 |
| | 600 | 1 | 21 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 4 | 34 | 12 | 32 | 11 | 40 | 1 | 46 | 0 | 29 | 35 |
| | 500 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 2 | 52 | 17 | 49 | 9 | 58 | 1 | 27 | 0 | 29 | 52 |
| | 400 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 1 | 80 | 21 | 77 | 6 | 62 | 0 | — | 0 | 28 | 74 |
| | 300 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 1 | 126 | 0 | — | 12 | 101 | 5 | 69 | 0 | — | 0 | 18 | 94 |
| | 200 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 4 | 94 | 0 | — | 0 | — | 0 | 4 | 94 |
| | 150 | — | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| | 100 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| | 70 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| 50 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | |
| 30 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | |
| 20 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | |
| 10 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | |
| 1200 U.T. | Surface | 5 | 9 | 0 | — | 4 | 12 | 1 | 13 | 0 | — | 0 | — | 3 | 15 | 2 | 6 | 0 | — | 4 | 6 | 3 | 7 | 5 | 10 | 4 | 31 | 8 |
| | 1000 | 2 | 10 | 2 | 12 | 3 | 17 | 1 | 13 | 0 | — | 0 | — | 0 | — | 3 | 6 | 1 | 4 | 4 | 6 | 4 | 8 | 5 | 8 | 1 | 26 | 9 |
| | 850 | 6 | 12 | 4 | 14 | 1 | 6 | 1 | 19 | 0 | — | 0 | — | 2 | 34 | 1 | 8 | 2 | 9 | 4 | 14 | 7 | 12 | 3 | 21 | 0 | 31 | 15 |
| | 700 | 2 | 22 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 1 | 17 | 4 | 33 | 1 | 16 | 5 | 27 | 12 | 20 | 6 | 21 | 0 | 31 | 23 |
| | 600 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 5 | 29 | 11 | 29 | 12 | 39 | 2 | 27 | 0 | 31 | 35 |
| | 500 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 1 | 15 | 4 | 40 | 14 | 51 | 10 | 49 | 1 | 40 | 0 | 30 | 47 |
| | 400 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 4 | 62 | 17 | 78 | 8 | 64 | 0 | — | 0 | 29 | 72 |
| | 300 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 1 | 60 | 11 | 83 | 4 | 76 | 0 | — | 0 | 16 | 80 |
| | 200 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 4 | 93 | 2 | 98 | 0 | — | 0 | 6 | 94 |
| | 150 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 1 | 83 | 1 | 98 | 0 | — | 0 | 2 | 90 |
| | 100 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| | 70 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| 50 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | |
| 30 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | |
| 20 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | |
| 10 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | |

N = The number of cases the element has been observed during the month.

TN = The total number of cases the wind has been observed for all directions during the month.

TABLE B 3 (cont'd).—NUMBER OF OCCURRENCES OF WIND DIRECTION WITHIN SPECIFIED RANGES AND THE MEAN SCALAR WIND SPEED AT THE STANDARD AND SELECTED PRESSURE SURFACES.

ASWAN (A)—JANUARY 1964

| Time | Pressure Surface (Millibar) | Wint between ranges of direction (000—360) | | | | | | | | | | | | | | | | Number of calm winds | Total number of observations (T N) | Mean Scalar wind Speed (Knots) | | | | | | | | |
|--------------|--------------------------------|--|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|--------|-----------|--------|-----------|-------------------------|---------------------------------------|-----------------------------------|-----|----|----|---|----|----|----|-----|
| | | 345 / 014 | 015 / 044 | 045 / 074 | 075 / 104 | 105 / 134 | 135 / 164 | 165 / 194 | 195 / 224 | 225 / 254 | 255 / 284 | 285 / 314 | 315 / 344 | | | | | | | | | | | | | | | |
| | | N m | (ff) m | N m | (ff) m | N m | (ff) m | N m | (ff) m | N m | (ff) m | N m | (ff) m | N m | (ff) m | N m | (ff) m | | | | | | | | | | | |
| 0000 U.T. | Surface | 22 | 13 | 4 | 14 | 2 | 10 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 1 | 14 | 2 | 31 | 12 | | |
| | 1000 | 5 | 12 | 6 | 8 | 1 | 7 | 1 | 18 | 1 | 12 | 1 | 3 | 0 | — | 1 | 14 | 2 | 8 | 2 | 11 | 4 | 12 | 7 | 12 | 0 | 31 | 11 |
| | 850 | 4 | 22 | 1 | 8 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 2 | 32 | 13 | 31 | 9 | 28 | 2 | 16 | 0 | 31 | 27 |
| | 700 | 1 | 13 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 1 | 20 | 4 | 56 | 18 | 38 | 5 | 39 | 2 | 41 | 0 | 31 | 40 |
| | 600 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 2 | 52 | 18 | 50 | 8 | 47 | 0 | — | 0 | 28 | 49 |
| | 500 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 4 | 60 | 21 | 65 | 2 | 35 | 0 | — | 0 | 27 | 62 |
| | 400 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 2 | 84 | 18 | 68 | 1 | 36 | 0 | — | 0 | 21 | 68 |
| | 300 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 1 | 102 | 5 | 98 | 1 | 88 | 0 | — | 0 | 7 | 98 |
| | 200 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 1 | 146 | 2 | 98 | 0 | — | 0 | — | 0 | 3 | 114 |
| | 150 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 2 | 71 | 0 | — | 0 | — | 0 | 2 | 71 |
| | 100 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| | 70 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| 50 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | |
| 30 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | |
| 20 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | |
| 10 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | |
| 1200 U.T. | Surface | 21 | 12 | 1 | 10 | 0 | — | 2 | 12 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 3 | 8 | 1 | 20 | 1 | 8 | 2 | 31 | 11 |
| | 1000 | 10 | 14 | 3 | 12 | 1 | 2 | 1 | 11 | 2 | 10 | 0 | — | 1 | 11 | 0 | — | 1 | 12 | 3 | 12 | 3 | 15 | 6 | 14 | 0 | 31 | 13 |
| | 850 | 1 | 82 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 2 | 45 | 3 | 34 | 15 | 38 | 10 | 35 | 4 | 21 | 0 | 31 | 27 |
| | 700 | 1 | 30 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 3 | 34 | 12 | 25 | 9 | 25 | 1 | 34 | 0 | 30 | 36 |
| | 600 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 1 | 40 | 5 | 42 | 16 | 58 | 7 | 49 | 1 | 45 | 0 | 30 | 52 |
| | 500 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 6 | 66 | 21 | 64 | 2 | 65 | 0 | — | 0 | 29 | 65 |
| | 400 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 1 | 74 | 17 | 68 | 1 | 78 | 0 | — | 0 | 19 | 69 |
| | 300 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 1 | 96 | 4 | 106 | 0 | — | 0 | — | 0 | 5 | 104 |
| | 200 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 1 | 100 | 2 | 96 | 0 | — | 0 | — | 0 | 3 | 97 |
| | 150 | — | — | 9 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | — | — | — | — | — | — | — | — | — | — | — |
| | 100 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| | 700 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| 50 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | |
| 30 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | |
| 20 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | |
| 10 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | |

— the number of cases the element has been observed during the month.

REVIEW OF AGRO-METEOROLOGICAL STATION AT EL KASR

JANUARY 1964

Compared with the normal values of air temperature, relative humidity and Piche evaporation in the screen and also rainfall, the month was mild, rather humid and wet. It was characterized by successive cold waves in the first four weeks, during which the maximum air temperature was below normal in most of the days and a pronounced warm spell towards the end of the month .

The second cold wave in the month started on the 6th and gave the absolute minimum air temperature 1.4°C (7.1°C below normal) on the 7th when the range of variation of air temperature was maximum (15°C) Also the lowest value of Piche evaporation was associated with this cold wave and occurred on the 9 th.

A remarkable cold wave continued for 10 days starting on the 18th, when the peak was experienced and gave the lowest maximum for the month 11.6°C (6.1°C below normal).

The warm spell began on the 29th, giving the highest minimum air temperature on the 30 th., 13.7°C (4.7°C above normal) and the absolute maximum temperature 20.8°C (3.1°C above normal) on the 31st, on which the maximum Piche evaporation was experienced, 15.7 mms. (9.3 mms above normal).

For the month as a whole, the mean air temperature, the relative humidity and the total amount of rainfall were all above normal by 0.3°C , 11% and 21.4 mms respectively while the mean Piche evaporation was 1.0 mm. below normal.

REVIEW OF AGRO-METEOROLOGICAL STATION AT TAHRIR

JANUARY 1964

With respect to air temperature and relative humidity, this month was slightly colder and drier than January of the last year, although it was characterized by frequent rainy days and high percentage of cloud cover.

This month was distinguished by a remarkable cold wave starting on the 18th and lasting for a week. On that day a pronounced cold front passed Badre Centre in the early morning, when the lowest maximum temperature for the month occurred (12.6°C), being 8.2°C lower than that of the preceding day. It was surprising to find that the day time mean temperature of the 18th was lower than the night time mean temperature by 2.5°C . The absolute minimum air temperature and the lowest value of vapour pressure were recorded on the following day whereas the absolute minimum air temperature at 5 cms. above the dry soil happened on the 21st.

A warm spell prevailed towards the end of the month, giving the absolute maximum air temperature on the 31 st. and the lowest relative humidity on the 30th as well as the highest evaporation for one day.

The maximum soil temperatures for the dry field at the different depths were lower than those of January 1963, by varying amounts less than 5.8°C , while the minimum soil temperatures were higher down to 5 cms. depth by less than 1.0°C , and lower for further depths by $1.4-0.9^{\circ}\text{C}$.

The air temperature at 5 cms. above dry soil did not fall below 0.6°C and it was above the freezing point for the whole month, whereas it reached -2.3°C last year.

At 2 metres above ground level, the mean air temperature of the day, night time mean, day time mean and the mean relative humidity of the day were all lower than January 1963 by 1.6, 1.3 , 2.2°C and 4% respectively; for the same level, the means of surface wind speed were also lower by 0.2 m/sec.

The actual duration of bright sunshine was about 65 % of the total possible duration, being less by 38.4 hours than last year.

Due to lower temperature and wind speed, the Piche and pan class A evaporations were lower than the values of 1963 by 2.3 and 1.62 mms. respectively.

Compared with traces of rain for January 1963, the total amount of rainfall was 9.0 mms, with the maximum in one day being 4.8 mms.

REVIEW OF AGRO-METEOROLOGICAL STATION AT GIZA

JANUARY 1964

Compared with the normal values for January of Giza, this month was slightly cooler and drier.

It was distinguished with a prolonged remarkable cold wave prevailing during the period from the 18 th. to the 28 th. with the peak on the 19 th. when the lowest maximum temperature 12.1°C (8°C below normal) and the absolute minimum temperature 1.0°C (5.3°C below normal) were recorded. On the same day the absolute minimum for air temperature at 5 cms. above dry and wet soils were also observed as well as the absolute minimum for soil temperatures in the dry field at depths 2 and 5 cms. The effect of the cooling was noticed in soil temperatures in the wet and grass fields during the following three days when the absolute minimum of soil temperatures to depths down to 20 cms. were also recorded. Moreover the minimum air temperature at 5 cms. above grass field fell to below the freezing point on 6 days during this cold wave namely the 19th, 21st, 22nd., 23rd., 24th. and 27th. On the 1st day of this cold wave, the smallest range of temperature as measured by the difference between the readings of the maximum and minimum thermometers in the screen was also observed.

A pronounced warm spell started on the 29th with the peak on the last day of the month giving the absolute maximum air temperature 28.2°C (7.7°C above normal) and also the highest minimum air temperature 15.4°C (9.5°C above normal). The effect of that warm spell extended to soil temperatures on the same day when the absolute maxima in the dry field took place at the depths 5, 10 & 20 cms; for the wet field at the depths 10 & 20 cms; as well as the grass field for the depths 0.3, 2, 5 & 10 cms. Also the lowest relative humidity and maximum Piche evaporation in one day were associated with this warm spell and happened on the 30 th. being 26 % (48% below normal) and 9.2 mms. (5.9 mms, above normal) respectively.

Minor cold waves prevailed during the 1st half of the month. The means of air temperature, relative humidity and vapour pressure of the day were slightly below normal with amounts 0.8°C , 2% and 0.8 mms. respectively.

The absolute minimum of air temperature at 5 cms. above the dry, wet and grass soils were generally higher than those of January 1963 by amounts 2.3, 1.8 & 2.5°C respectively.

The means of the surface wind speed at 2 metres for the day, night time and day time were all higher than those of last year by 0.3, 0.4 and 0.1 m/ sec. respectively.

The extreme maximum soil temperatures at different depths were generally lower than those of January 1963 by variable amounts less than 2.7°C , whereas the extreme minima of soil temperatures were generally higher by variable amounts less than 2.6°C .

The total actual duration of bright sunshine was 69% of the total possible duration or 32 hours less than those of last year. Also the mean Piche evaporation of the day, mean Pan class A evaporation, total potential evaporation and the total potential evapo-transpiration for grass were all lower than those of last year by 1.6, 0.53, 8.3 & 1.8 mms. respectively, although the mean Piche evaporation for the day was higher than normal by 2.9 mms.

REVIEW OF AGRO-METEOROLOGICAL STATION AT KHARGA

JANUARY 1964

This month was slightly colder and drier as compared with the normal values of air temperature and relative humidity at 2 metres above ground level in the screen at Kharga Qasis during January. It was also distinguished by lower values of maximum and minimum air temperature during most of the first four weeks which were subject to a series of minor cold waves as well as an intense warm spell towards the end of the month.

During the first cold wave the sunshine duration and the wind speeds at 50, 100 and 200 cms. above ground level were minimum on the 2nd and also the evaporation from Piche in the screen, 6.5 mms. (3.5 mms. below normal) and in the free air at heights 120, 60 and 1 cms above ground level. The lowest value of evaporation from Pan class A occurred on the 9th. associated with the 2nd. cold wave during which the absolute minimum air temperature happened on the 13th, 2.2 °C (4.0 °C below normal) and also the soil temperature at 1 and 2 cms. on the 16th.

The more pronounced cold wave started on the 18th with the peak on the 19 th. when the lowest maximum air temperature was observed., 15.0 °C (7.2 °C below normal). The lowest value of vapour pressure was noticed on the following day, whereas the absolute minimum air temperature at 5 cms. above dry soil and those at depths 3.5, 10 and 20 cms were all recorded on the 21st.

The remarkable warm spell started on the 29th. with the peak on the last day of the month giving the absolute maximum air temperature 31.7 °C (8.6 °C above normal) and also the highest minimum air temperature in the screen, 9.1 °C (2.6 °C above normal) and at height 5 cms. above dry soil. On the same day the highest value of evaporation from Piche in the screen 23.5 mms. (14.0 mms. above normal) and in the free air at levels 120, 60 and 1 cms. above ground level were recorded as well as the maximum soil temperatures in the dry field down to 20 cms. depth and the lowest minimum soil temperatures at depths 200 and 300 cms.

The means of the maximum air temperature in the screen, the minimum and the mean of the day were all lower than the normal by 1.7, 1.4 and 0.4 °C respectively.

The mean relative humidity in the screen was 49 % (9% below normal) whereas the Piche evaporation in the screen was 11.3 mms. (1.8 mms. above normal).

The sunshine duration during the month was 300.8 hours which is 90.1 % from the possible duration.

**TABLE C 1.—AIR TEMPERATURE AT 2 METRES ABOVE GROUND
JANUARY—1964**

| STATION | Air Temperature (°C) | | | | | Mean Duration in hours of daily air temperature above the following values. | | | | | | | | | | |
|---------------|----------------------|-----------|-----------------|-----------------|---------------|---|------|------|------|------|------|------|------|------|------|------|
| | Mean Max. | Mean Min. | Mean of the day | Night time mean | Day time mean | -5°C | 0°C | 5°C | 10°C | 15°C | 20°C | 25°C | 30°C | 35°C | 40°C | 45°C |
| El Kasr | 17.1 | 8.6 | 12.7 | 11.3 | 14.6 | 24.0 | 24.0 | 23.7 | 17.8 | 5.3 | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Fahrir | 18.9 | 6.9 | 12.1 | 10.3 | 14.5 | 24.0 | 24.0 | 23.5 | 15.5 | 6.2 | 0.7 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Biza | 18.9 | 5.8 | 11.8 | 9.1 | 14.4 | 24.0 | 24.0 | 22.8 | 15.0 | 6.2 | 0.6 | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 |
| Kharga | 20.4 | 4.6 | 12.7 | 10.1 | 15.8 | 24.0 | 24.0 | 22.9 | 15.7 | 8.6 | 1.4 | 0.4 | 0.1 | 0.0 | 0.0 | 0.0 |

**TABLE C 2.—ABSOLUTE VALUES OF AIR TEMPERATURE AT 2 METRES ABOVE GROUND,
ABSOLUTE MINIMUM AIR TEMPERATURE AT 5cms ABOVE GROUND OVER
DIFFERENT FIELDS.**

JANUARY—1964

| STATION | Max. Temp. at 2 metres (°C) | | | | Min. Temp. at 2 metres (°C) | | | | Min. Temp. at 5 cms. above (°C) | | | |
|---------------|-----------------------------|------|--------|------|-----------------------------|------|--------|------|---------------------------------|-------|-------|------|
| | Highest | | Lowest | | Highest | | Lowest | | Dry soil | | Grass | |
| | Value | Date | Value | Date | Value | Date | Value | Date | Value | Date | Value | Date |
| El Kasr | 21.6 | 5 | 11.8 | 18 | 13.3 | 30 | 2.7 | 7 | — | — | — | — |
| Fahrir | 24.9 | 31 | 12.6 | 18 | 12.4 | 31 | 2.8 | 19 | +0.6 | 21 | — | — |
| Biza | 28.2 | 31 | 12.2 | 18 | 13.1 | 31 | 1.0 | 19 | -2.1 | 19.21 | -3.4 | 23 |
| Kharga | 31.7 | 31 | 15.0 | 19 | 9.1 | 31 | 2.2 | 13 | 0.0 | 21 | — | — |

TABLE C 3.—(SOLAR+SKY) RADIATION, DURATION OF BRIGHT SUNSHINE, RELATIVE HUMIDITY, VAPOUR PRESSURE AT 2 METRES ABOVE GROUND, EVAPORATION & RAINFALL.

JANUARY—1964

| | (Solar+Sky) Radiation gm. cal/cm ² | Duration of Bright Sunshine (hours) | | | Relative Humidity. % | | | | | | Vapour pressure (mms) | | | | | | Evaporation(mms) | | Rainfall (mms) | | |
|-------|---|-------------------------------------|------------------------|-----|----------------------|----|-------------|-----------|--------|------|-----------------------|---------|---------|------|--------|------|------------------|-------------|----------------------|----------------------|------|
| | | Total Actual monthly | Total Possible monthly | % | Duration in hours | | Mean of day | 1200 U.T. | Lowest | Date | Mean of day | 1200 UT | Highest | Date | Lowest | Date | Piche | Pan class A | Total Amount Monthly | Max. Fall in one day | Date |
| | | | | | ✓ | ✗ | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | |
| 203.2 | — | 321.0 | — | — | — | 74 | 59 | 31 | 31 | 7.8 | 8.0 | 11.2 | 13 | 4.1 | 7 | — | 3.88 | 62.4 | 16.5 | 12 | |
| 281.4 | 207.8 | 322.7 | 64 | 4.0 | 9.0 | 71 | 47 | 23 | 30 | 7.3 | 6.9 | 10.7 | 16 | 4.1 | 19 | 6.7 | 3.39 | 9.0 | 4.8 | 4 | |
| 278.7 | 222.1 | 323.7 | 69 | 3.6 | 7.7 | 69 | 46 | 26 | 30 | 6.9 | 6.9 | 11.0 | 31 | 3.8 | 19 | 6.2 | 3.07 | 3.3 | 1.4 | 17 | |
| 342.8 | 300.8 | 333.8 | 90 | 0.0 | 0.1 | 40 | 33 | 18 | 29 | 5.1 | 6.4 | 10.3 | 20 | 3.6 | 20 | 13.8 | 6.21 | 0.0 | 0.0 | — | |

*Printed at the General Organisation
for Government Printing Offices, Cairo*
Under-Secretary of State
ALY SULTAN ALY
Chairman of the Board of Directors

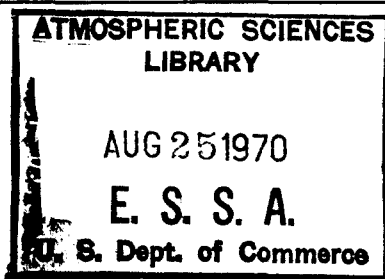
Pam by



UNITED ARAB REPUBLIC

MONTHLY WEATHER REPORT

VOLUME 7



NUMBER 2

FEBRUARY, 1964

U.D.C. 551. 506,1 (62)

MINISTRY OF SCIENTIFIC RESEARCH — METEOROLOGICAL DEPARTMENT
CAIRO

PUBLICATIONS OF THE METEOROLOGICAL DEPARTMENT OF THE UNITED ARAB REPUBLIC—CAIRO

In fulfilment of its duties as the National Meteorological service for the U.A.R., the Meteorological Department issues several reports and publications on weather climate and agrometeorology. The principal publications are described on this page.

Orders for publications should be addressed to :—

“The Director General, Meteorological Department, Kubri-el-Qubbeh—CAIRO”.

THE DAILY WEATHER REPORT

This report is printed daily in the Meteorological Department. It contains surface and upper air observations carried by the relevant networks of the Republic and made at the four main synoptic hours of observations (00, 06, 12 and 18 U.T.); as well as ship observations over the Eastern Mediterranean and north Red Sea made at the same times.

It also contains two surface synoptic charts at 00 and 12 U.T. and two upper air charts for the standard isobaric surfaces 700 & 500 mbs. at both 00 and 12 U.T.

In compliance with resolution 8 (EC-XIII) of WMO, foreign upper air data included in Cairo Subregional Broadcast are also given in this report.

THE MONTHLY WEATHER REPORT

First issued in 1909, the Monthly Weather Report served to give a brief summary of the weather conditions that prevailed over Egypt during the month, with a table showing the mean values for few meteorological elements and their deviations from the normal values. From 1954 to 1957 this report was in a rapid state of development and extension resulting into a voluminous report on January 1958 giving surface, upper air, and agro-meteorological data for U.A.R.

THE AGRO-METEOROLOGICAL ABRIDGED MONTHLY REPORT

Gives a review of weather experienced in the agro-meteorological stations of the U.A.R. as well as monthly values of certain elements.

THE ANNUAL REPORT

This report gives annual values and statistics for the various meteorological elements, together with a summary of the weather conditions that prevailed during all months of the year .

CLIMATOLOGICAL NORMALS FOR EGYPT

The normals, long averages and statistical data are given in one edition for stations in Egypt from the date of opening of each station up to 1945. A new voluminous edition was issued in March 1968 which brings normals and mean values up till 1960.



UNITED ARAB REPUBLIC

MONTHLY WEATHER REPORT

VOLUME 7

NUMBER 2

FEBRUARY, 1964

U.D.C. 551. 506,1 (62)

**MINISTRY OF SCIENTIFIC RESEARCH — METEOROLOGICAL DEPARTMENT
CAIRO**

CONTENTS

| | PAGE |
|--|------|
| Genral Summary of Weather Conditions | 1-2 |

SURFACE DATA

| | |
|--|-----|
| Table A1.—Monthly values of the Atmospheric Pressure, Air Temperature, Relative Humidity, Bright Sunshine Duration and Piche Evaporation | 3 |
| „ A2.—Maximum and Minimum Air Temperatures | 4 |
| „ A3.—Sky Cover and Rainfall | 5 |
| „ A4.—Number of Days of Occurrence of Miscellaneous Weather Phenomena | 6 |
| „ A.5—Number in Hours of Occurrences of Concurrent Surface Wind Speed and Direction Recorded Within Specified Ranges | 7,8 |

UPPER AIR DATA

| | |
|---|-------|
| Table B1.—Monthly Means and Monthly Absolute Higher & Lower Values of Altitude, air Temperature & Dew point at Standard and Selected Pressure Surface | 9,10 |
| „ B2.—Mean and Extreme values of The Freezing Level and The Tropopause; The Highest Wind Speed in The Upper Air | 11 |
| „ B3.—Number of Occurreneces of Wind Direction Within Specified Ranges and The Mean Sealar Wind Speed at the Standard and Selected Pressure Surfaces | 12-14 |

AGRO-METEOROLOGICAL DATA

| | |
|--|-------|
| Reviews of Agro-meteorological stations | 15-17 |
| Table C1.—Air Temperature at 2 Metres Above Ground | 18 |
| „ C2.—Aboslute Values of Air Temperature at 2 Metres Above Ground, Absolute Minimum Air Tempereture at 5 Cms Above Ground Over Different Fields. | 18 |
| „ C3.—(Solar + Sky) Radiation, Duration of Bright Sunshine, Relative Humidity and Vapour Pressure at 2 Metres Above Ground, Evaporation and Rainfall | 18 |
| „ C4.—Extreme Soil Temperature at Different Depths in Different Fields | 19 |
| „ C5.—Surface wind | 19 |

GENERAL SUMMARY OF WEATHER CONDITIONS

FEBRUARY 1964

Generally cold, intervened with three warm spells of short durations. Abnormally high rainfall over the northern parts, associated sometimes with thunderstorms. Frontal sandrising or sandstorms in the extreme west.

GENERAL DESCRIPTION OF WEATHER

The prevailing weather this month was cold in general and six successive cold fronts were experienced. Night temperatures were minimum round the 7th falling to round 0°C in scattered places in the central parts.

During the 2nd half of the month, the northern parts enjoyed three short warm spells round the 16th, 21st and 27th.

Rain fell over the northern parts on many days and the monthly rainfall exceeded its normal over scattered localities.

Occasional rising sand occurred on few separate days over scattered localities particularly the Western Desert district and the Mediterranean Coastal strip.

PRESSURE DISTRIBUTION

During this month, the pressure distribution over the surface map was characterized by the following.

— A high pressure ridge over Western Europe and North Africa Region.

— A high pressure ridge slightly north of the Caspian Sea Area.

— Transitory Mediterranean secondary depressions along their west-east track.

— The Sudan trough of low pressure. On the other hand, both the 700 and 500 mb upper air charts were characterized by the following upper systems.

— Two deep upper lows over north Russia and north Atlantic with a stationary block in between.

— A secondary well defined and relatively deep upper low over Southwest Russia.

— An upper high pressure belt south latitude 35°N.

This month started with two secondary depressions over East Mediterranean; they amalgamated and deepened appreciably on the 3rd but filled rapidly locally on the 4th and 5th.

On the 7th three secondary depressions developed over Tunisia, Greece and Asia Minor at the trailing polar front through Urasia, the whole system proceeded eastwards. The former secondary was the most active, it traversed Cyrenica by the 10th and East Mediterranean by the 11th. The latter two secondary depressions died rapidly as they reached Cyprus on the 8th and 9th respectively.

On the 15th and 19th two deep secondary depressions developed over West Mediterranean, following the same course through Mediterranean, they passed by Central Mediterranean round the 16th and 20th

respectively and traversed East Mediterranean round the 17th and 21st respectively.

On the 23rd the last travelling secondary depression during this month appeared over Tunisia. It proceeded eastwards, traversed Central Mediterranean round the 26th and attained East Mediterranean on the 27th where it remained stationary till the 28th, then it continued its eastward course on the 29th.

It is worth to mention that the subtropical high pressure belt operated over North Africa and Mediterranean Regions for short periods at the rear of the transitory Mediterranean depressions.

The polar jet stream at about 310 mb level appeared over the extreme north of the country round the end of the 3rd week, while the subtropical jet stream oscillated between latitudes 25 and 35° north at about 240 mbs most days of the month.

The highest wind speeds recorded were 145, 140 and 166 knots at Mersa Matruh, Helwan and Aswan on the 9th, 18th and 5th respectively.

SURFACE WIND

During most of the month prevailing winds were light/moderate NWly. As an exception winds were fresh/strong for short durations during transit of Mediterranean depressions through U.A.R. when they backed at first to S/SW in their advance and veered rapidly to NWly in their rear. Fresh/strong NW winds were outstanding on the western part of the Mediterranean Coastal strip and Red Sea district.

Gales were reported at : Dabaa on the 3rd and 4th ; Ras El Teen and Rosetta on the 3rd;

Abu Sueir on the 4th and at Fayed on the 3rd and 4th.

TEMPERATURE

Maximum temperature was of pronounced variability and was generally subnormal excluding few days of abnormally high maximum temperature in the north.

The absolute maximum temperature for the Republic was 30.6°C reported at Kom Ombo on the 21st.

Minimum temperature was of moderate variability and was generally subnormal excluding few days of abnormally high minimum temperature.

The absolute minimum temperature for the Republic was -2.2°C reported at Farafra on the 9th.

PRECIPITATION

Daily rain was light in general and confined to the northern parts, though it was heavy in scattered localities of the Mediterranean district particularly on the 3rd.

The weather in the northern parts was almost rainy during the periods (1st—4th), (8th—14th), (21st—24th) and (28th—29th), and rain penetrated in land southwards as far as Cairo during 1st rainy period. The monthly rain exceeded its normal value in many localities of the northern parts, elsewhere it was subnormal.

The absolute daily rainfall was 34.0 mms reported at Tolombat El-Boseili on the 3rd. The absolute monthly rainfall for the Republic was 66.0 mms reported also at Tolombat El-Boseili (Lower Egypt district).

M. F. TAHA

Under Secretary of State

Director General

Meteorological Department

Cairo, 19 / 4 / 1970

**TABLE A 1. — MONTHLY VALUES OF THE ATMOSPHERIC PRESSURE, AIR TEMPERATURE,
RELATIVE HUMIDITY, BRIGHT SUNSHINE DURATION & PICHE EVAPORATION.**

FEBRUARY — 1964

| STATION | Atmospheric Pressure (mbs) M.S.L | | Air Temperature °C | | | | | | | | | | Relative Humidity % | | Bright Sunshine Duration (Hours) | | | Piche Evap- (mms) Mean |
|---------------------|-------------------------------------|------------------------------|--------------------|---------------------------|-------------|---------------------------|-----------------|----------|---------------------------|----------|---------------------------|------|---------------------------|-----------------|-------------------------------------|------|------|---------------------------------|
| | | | Maximum | | Minimum | | $\frac{A+B}{2}$ | Dry Bulb | | Wet Bulb | | | | | | | | |
| | Mean | D.F. Normal or Average | (A) Mean | D.F. Normal or Average | (B) Mean | D.F. Normal or Average | | Mean | D.F. Normal or Average | Mean | D.F. Normal or Average | Mean | D.F. Normal or Average | Total Actual | Total Possible | % | | |
| Sallum | 1015.9 | —2.1 | 19.1 | —1.7 | 10.0 | —0.9 | 14.6 | 14.4 | —0.5 | 10.5 | —0.1 | 58 | + 7 | — | — | — | 6.3 | |
| Merna Matruh (A) . | 1016.6 | —0.8 | 18.1 | —0.8 | 8.7 | +0.3 | 13.4 | 13.1 | —0.3 | 10.0 | —0.5 | 65 | + 1 | 235.1 | 321.4 | 73.1 | 8.4 | |
| Alexandria (A) . . | 1016.4 | —1.1 | 19.1 | —0.1 | 9.0 | —0.7 | 14.0 | 13.7 | —0.3 | 10.8 | —0.4 | 68 | — 2 | 227.7 | 322.0 | 70.7 | 4.3 | |
| Port Said (A) . . . | 1016.3 | —0.7 | 18.9 | +0.2 | 10.7 | —1.4 | 14.8 | 13.9 | —0.9 | 11.2 | —1.0 | 70 | — 1 | 226.8 | 322.0 | 70.4 | 4.1 | |
| El Arish | 1016.4 | —0.8 | 18.9 | —1.2 | 8.9 | —0.1 | 13.9 | 13.5 | —0.3 | 10.9 | +0.1 | 71 | + 4 | 230.8 | 322.3 | 71.6 | 3.7 | |
| Ghazza | 1015.9 | —0.7 | 16.7 | —1.2 | 9.6 | —0.5 | 13.2 | 13.2 | —0.8 | 11.2 | —0.5 | 77 | + 2 | 187.8 | 321.4 | 58.4 | 3.4 | |
| Tanta | 1016.0 | — | 19.8 | — | 6.8 | — | 13.3 | 12.5 | — | 9.7 | — | 68 | — | 237.9 | 322.4 | 73.8 | 3.3 | |
| Cairo (A) | 1016.6 | —1.1 | 20.1 | —0.6 | 9.4 | +0.3 | 14.8 | 14.3 | —0.6 | 9.6 | —1.1 | 50 | — 6 | — | — | — | 10.0 | |
| Fayoum | 1016.8 | — | 21.3 | — | 7.2 | — | 14.2 | 13.9 | — | 9.6 | — | 54 | — | — | — | — | 4.6 | |
| Minya (A) | 1017.5 | —0.3 | 21.6 | —0.9 | 3.5 | —1.9 | 12.6 | 12.2 | —1.2 | 8.5 | —0.4 | 57 | + 6 | — | — | — | 5.1 | |
| Assyout (A) | 1017.3 | +0.1 | 21.5 | —1.3 | 7.2 | —0.3 | 14.4 | 14.1 | —1.3 | 8.4 | —1.1 | 40 | 0 | — | — | — | 10.0 | |
| Luxor (A) | 1016.0 | —0.1 | 23.3 | —2.1 | 6.5 | —0.3 | 14.9 | 15.0 | —1.0 | 9.6 | —0.5 | 45 | + 3 | — | — | — | 5.7 | |
| Aswan (A) | 1016.1 | +0.4 | 23.0 | —3.5 | 8.2 | —2.4 | 15.6 | 16.2 | —1.1 | 8.4 | —0.5 | 26 | + 2 | — | — | — | 13.1 | |
| Siwa | 1017.2 | —0.7 | 20.9 | —0.9 | 5.8 | +0.1 | 13.4 | 13.4 | —0.8 | 8.4 | —0.3 | 46 | + 2 | — | — | — | 7.7 | |
| Bahariya | 1017.8 | —1.5 | 21.1 | +0.4 | 5.8 | +0.3 | 13.4 | 13.5 | +0.2 | 8.0 | —0.5 | 41 | — 7 | — | — | — | 6.0 | |
| Farafra | 1019.1 | — | 20.7 | — | 4.4 | — | 12.6 | 12.9 | — | 7.0 | — | 35 | — | — | — | — | 9.0 | |
| Dakhla | 1016.7 | 0.0 | 22.5 | —1.2 | 3.3 | —2.7 | 12.9 | 13.0 | —0.5 | 6.9 | —1.0 | 34 | + 2 | — | — | — | 7.0 | |
| Kharga | 1017.7 | — | 23.1 | — | 6.4 | — | 14.8 | 15.1 | — | 8.4 | — | 33 | — | 291.4 | 330.0 | 88.3 | 14.1 | |
| Tor | 1015.5 | —1.8 | 20.9 | —1.2 | 10.4 | +0.7 | 15.6 | 16.3 | +0.6 | 10.9 | —0.3 | 47 | — 8 | — | — | — | 6.7 | |
| Hurgada | 1015.4 | —0.2 | 21.3 | +0.4 | 9.9 | 0.0 | 15.6 | 15.8 | —0.7 | 10.1 | —1.5 | 43 | — 9 | — | — | — | 14.4 | |
| Quseir | 1015.2 | —0.7 | 21.7 | —2.3 | 13.6 | —0.7 | 17.6 | 17.8 | —0.6 | 11.7 | —0.7 | 43 | — 3 | — | — | — | 15.3 | |

TABLE A2.— MAXIMUM AND MINIMUM AIR TEMPERATURES

FEBRUARY — 1964

| Station | Maximum Temperature °C | | | | | | | | | Grass Min. Temp. | | Minimum Temperature °C | | | | | | | | |
|-----------------------|------------------------|------|--------|------|----------------------------|-----|-----|-----|-----|------------------|----------------|------------------------|----------|--------|------|-----------------------------|----|----|-----|--|
| | Highest | Date | Lowest | Date | No. of Days with Max-Temp. | | | | | Mean | D. From Normal | Highest | Date | Lowest | Date | No. of Days with Min. Temp. | | | | |
| | | | | | >25 | >30 | >35 | >40 | >45 | | | | | | | <10 | <5 | <0 | <-5 | |
| Sallum | 28.5 | 26 | 15.4 | 12 | 2 | 0 | 0 | 0 | 0 | 9.7 | — | 14.2 | 20 | 6.5 | 2 | 14 | 0 | 0 | 0 | |
| Mersa Matruh . (A) | 24.6 | 26 | 13.7 | 4 | 0 | 0 | 0 | 0 | 0 | — | — | 13.5 | 27 | 6.1 | 7 | 24 | 0 | 0 | 0 | |
| Alexandria . . . (A) | 25.2 | 27 | 15.3 | 3 | 1 | 0 | 0 | 0 | 0 | — | — | 11.8 | 12,18,23 | 5.8 | 26 | 20 | 0 | 0 | 0 | |
| Port Said . . . (A) | 21.3 | 11 | 14.2 | 4 | 0 | 0 | 0 | 0 | 0 | 9.8 | — | 14.4 | 20 | 7.5 | 5 | 9 | 0 | 0 | 0 | |
| El Arish | 25.0 | 27 | 15.5 | 4 | 0 | 0 | 0 | 0 | 0 | 7.4 | — | 13.0 | 28 | 5.5 | 7 | 18 | 0 | 0 | 0 | |
| Ghazza | 22.7 | 16 | 14.0 | 13 | 0 | 0 | 0 | 0 | 0 | 8.6 | — | 12.6 | 28 | 5.3 | 8 | 16 | 0 | 0 | 0 | |
| Tanta | 23.7 | 21 | 14.5 | 4 | 0 | 0 | 0 | 0 | 0 | — | — | 9.8 | 10,29 | 2.6 | 7 | 29 | 3 | 0 | 0 | |
| Cairo (A) | 28.6 | 27 | 16.5 | 13 | 1 | 0 | 0 | 0 | 0 | — | — | 13.0 | 11 | 4.6 | 8 | 17 | 1 | 0 | 0 | |
| Fayoum | 29.0 | 27 | 18.1 | 4,13 | 3 | 0 | 0 | 0 | 0 | 3.8 | — | 10.6 | 28 | 4.4 | 13 | 27 | 5 | 0 | 0 | |
| Minya (A) | 28.0 | 27 | 17.3 | 6 | 2 | 0 | 0 | 0 | 0 | 1.6 | — | 6.3 | 29 | —0.3 | 8 | 29 | 17 | 1 | 0 | |
| Assyout (A) | 27.3 | 27 | 16.8 | 13 | 5 | 0 | 0 | 0 | 0 | 5.7 | — | 10.2 | 28 | 3.7 | 7 | 28 | 2 | 0 | 0 | |
| Luxor (A) | 28.6 | 21 | 19.0 | 5,13 | 10 | 0 | 0 | 0 | 0 | — | — | 13.8 | 1 | 2.0 | 7 | 26 | 7 | 0 | 0 | |
| Aswan (A) | 29.4 | 1 | 18.8 | 6 | 10 | 0 | 0 | 0 | 0 | — | — | 13.0 | 1 | 4.8 | 7 | 23 | 1 | 0 | 0 | |
| Siwa | 30.2 | 26 | 17.0 | 2,11 | 3 | 1 | 0 | 0 | 0 | 4.1 | — | 14.0 | 27 | 0.9 | 8 | 26 | 13 | 0 | 0 | |
| Bahariya | 28.0 | 27 | 17.2 | 5 | 3 | 0 | 0 | 0 | 0 | 4.9 | — | 11.5 | 27 | 1.0 | 8 | 26 | 12 | 0 | 0 | |
| Farafra | 30.0 | 27 | 16.0 | 7 | 4 | 0 | 0 | 0 | 0 | 3.2 | — | 11.6 | 28 | —2.2 | 9 | 25 | 16 | 4 | 0 | |
| Dakhla | 29.6 | 27 | 17.4 | 12 | 5 | 0 | 0 | 0 | 0 | — | — | 9.7 | 29 | —1.5 | 9 | 29 | 24 | 4 | 0 | |
| Kharga | 29.8 | 27 | 18.7 | 6 | 9 | 0 | 0 | 0 | 0 | 4.1 | — | 12.2 | 28 | 2.1 | 9 | 26 | 10 | 0 | 0 | |
| Tor | 27.2 | 22 | 17.4 | 13 | 1 | 0 | 0 | 0 | 0 | — | — | 17.6 | 1 | 5.0 | 8 | 16 | 0 | 0 | 0 | |
| Hurgada | 26.0 | 22 | 18.2 | 13 | 1 | 0 | 0 | 0 | 0 | — | — | 13.1 | 29 | 7.6 | 3,8 | 21 | 0 | 0 | 0 | |
| Quseir | 28.2 | 28 | 18.5 | 8 | 1 | 0 | 0 | 0 | 0 | — | — | 16.2 | 26 | 10.0 | 9 | 0 | 0 | 0 | 0 | |

TABLE A 3.—SKY COVER AND RAINFALL

FEBRUARY — 1964

| Station | Mean Sky Cover Oct. | | | | | Rainfall mms. | | | | | | | | | | |
|--------------------------|---------------------|------|------|------|-------|-----------------|----------------|-------------------------|------|------------------------------------|------|------|------|-----|-----|-----|
| | 00 | 06 | 12 | 18 | Daily | Total Amount | D. From Normal | Max. Fall in one day | | Number of Days with Amount of Rain | | | | | | |
| | U.T. | U.T. | U.T. | U.T. | Mean | | | Amount | Date | <0.1 | ≥0.1 | ≥1.0 | ≥5.0 | ≥10 | ≥25 | ≥50 |
| Sallum | 2.5 | 2.2 | 4.4 | 2.3 | 2.9 | 36.8 | +29.7 | 15.7 | 11 | 0 | 5 | 4 | 3 | 2 | 0 | 0 |
| Mersa Matruh . . . (A) | 2.5 | 3.8 | 4.1 | 3.1 | 3.1 | 28.7 | +12.3 | 16.5 | 3 | 0 | 10 | 5 | 1 | 1 | 0 | 0 |
| Alexandria (A) | 3.9 | 4.8 | 4.6 | 3.1 | 4.1 | 58.4 | +30.0 | 28.0 | 3 | 1 | 12 | 6 | 4 | 2 | 1 | 0 |
| Port Said (A) | 1.8 | 3.1 | 3.3 | 2.1 | 2.7 | 23.2 | +11.4 | 7.2 | 4 | 0 | 9 | 7 | 2 | 0 | 0 | 0 |
| Mi Arish | 3.5 | 3.9 | 3.8 | 3.4 | 3.6 | 25.3 | +9.3 | 9.8 | 12 | 0 | 9 | 5 | 2 | 0 | 0 | 0 |
| Ghazza | 3.3 | 4.8 | 4.2 | 2.6 | 3.7 | 115.8 | +58.9 | 25.0 | 28 | 1 | 17 | 13 | 6 | 5 | 1 | 0 |
| Tanta | — | 1.9 | 3.8 | 0.7 | — | 6.2 | —1.3 | 4.2 | 4 | 0 | 8 | 1 | 0 | 0 | 0 | 0 |
| Cairo (A) | 1.1 | 2.9 | 4.0 | 1.6 | 2.5 | 0.7 | —3.5 | 0.3 | 3 | 0 | 3 | 0 | 0 | 0 | 0 | 0 |
| Fayoum | — | 1.4 | 2.0 | 0.7 | — | 0.0 | —1.6 | 0.0 | — | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Minya (A) | 0.1 | 1.1 | 2.4 | 0.9 | 0.5 | 0.0 | —1.4 | 0.0 | — | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Assyout (A) | 0.0 | 0.9 | 1.9 | 0.4 | 0.7 | 0.0 | —0.4 | 0.0 | — | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Luxor (A) | 0.4 | 1.8 | 1.6 | 1.1 | 1.7 | 0.0 | —0.2 | 0.0 | — | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Aswan (A) | 0.1 | 1.6 | 2.1 | 1.1 | 1.0 | 0.0 | —Tr. | 0.0 | — | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Siwa | 0.5 | 1.2 | 2.5 | 1.2 | 2.3 | Tr. | —2.7 | Tr. | 11 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| Bahariya | 0.5 | 1.5 | 2.1 | 0.4 | 1.1 | 0.0 | —1.2 | 0.0 | — | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Fara'ra | 0.1 | 1.7 | 1.4 | 0.4 | 0.9 | 0.0 | —0.8 | 0.0 | — | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Dakhla | 0.3 | 1.4 | 1.8 | 0.6 | 1.0 | 0.0 | —0.4 | 0.0 | — | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Kharga | — | 1.6 | 2.1 | 0.7 | — | 0.0 | —0.4 | 0.0 | — | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Tor | 1.0 | 1.2 | 1.7 | 0.9 | 1.0 | 0.0 | —1.3 | 0.0 | — | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Hurgada | 0.4 | 1.6 | 1.3 | 0.9 | 1.0 | 0.0 | —Tr. | 0.0 | — | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Quseir | 0.4 | 2.2 | 2.2 | 0.8 | 1.4 | 0.0 | —Tr. | 0.0 | — | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

TABLE A 4. — DAYS OF OCCURRENCE OF MISCELLANEOUS WEATHER PHENOMENA.

FEBRUARY 1964

| Station | Precipitation | | | | Frost | Thunderstorm, | Mist Vis \geq 1000 metres | Fog Vis $<$ 1000 Metres | Haze Vis \geq 1000 Metres | Thick Haze Vis $<$ 1000 Metres | Dust or Sandrising Vis \geq 1000 Metres | Dust or Sandstorm Vis $<$ 1000 Metres | Gale | Clear Sky | Cloudy Sky |
|----------------------------|---------------|------|--------------|------|-------|---------------|-----------------------------|-------------------------|-----------------------------|--------------------------------|---|---------------------------------------|------|-----------|------------|
| | Rain | Snow | Ice, Pellets | Hail | | | | | | | | | | | |
| Sallum | 5 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 2 | 1 | 0 | 8 | 0 |
| Merse Matruh (A) | 7 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 7 | 2 | 0 | 9 | 1 |
| Alexandria (A) | 11 | 0 | 0 | 1 | 0 | 4 | 3 | 1 | 1 | 0 | 1 | 0 | 0 | 3 | 5 |
| Port Said (A) | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 2 | 0 | 0 | 11 | 2 |
| El Arish | 10 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 2 | 0 | 4 | 0 | 0 | 7 | 1 |
| Ghazza | 17 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 1 | 0 | 3 | 0 | 0 | 9 | 5 |
| Tanta | 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | — | — |
| Cairo (A) | 3 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 12 | 0 | 6 | 1 | 0 | 10 | 0 |
| Fayoum | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | — | — |
| Minya (A) | 0 | 0 | 0 | 0 | 0 | 0 | 10 | 1 | 2 | 0 | 1 | 0 | 0 | 20 | 0 |
| Assyout (A) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 27 | 0 |
| Luxor (A) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 7 | 0 | 1 | 0 | 0 | 20 | 0 |
| Aswan (A) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 3 | 0 | 0 | 23 | 0 |
| Siva | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 0 | 19 | 0 |
| Behariya | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 0 | 0 | 24 | 0 |
| Parafra | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 0 | 0 | 25 | 0 |
| Dakhla | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 24 | 0 |
| Kharga | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | — | — |
| Tor | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 4 | 0 | 0 | 23 | 0 |
| Hurgahda | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 22 | 0 |
| Qusir | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 6 | 0 | 0 | 21 | 0 |

**TABLE A.5.—NUMBER IN HOURS OF OCCURRENCES OF CONCURRENT SURFACE
WIND SPEED AND DIRECTION RECORDED WITHIN SPECIFIED RANGES**

FEBRUARY — 1964

| Station | calm (hours) | Variable (hours) | Unrecorded (hours) | Wind speed in knots | Number in hours of occurrences of wind blowing from the ranges of directions indicated | | | | | | | | | | | | |
|-------------------------|--------------|------------------|--------------------|--|---|--------------------------|-------------------------|--------------------------|--------------------------|----------------------------|--------------------------|---------------------------|----------------------------|----------------------------|---------------------------|---------------------------|-----------------------------|
| | | | | | 345 / 014 | 015 / 044 | 045 / 074 | 075 / 104 | 105 / 134 | 135 / 164 | 165 / 194 | 195 / 224 | 225 / 254 | 255 / 284 | 285 / 314 | 315 / 344 | All directions |
| Mersa Matruh . . . (A) | 14 | 0 | 0 | 1-10 11-27 28-47 ≥ 48 All speeds | 29 19 0 0 48 | 10 15 0 0 34 | 10 0 0 0 10 | 10 7 0 0 17 | 10 9 0 0 19 | 13 10 0 0 28 | 14 29 2 0 45 | 15 31 3 0 49 | 57 46 1 0 103 | 71 78 1 0 150 | 24 60 0 0 84 | 23 72 0 0 95 | 300 376 6 0 682 |
| Alexandria. (A) | 10 | 0 | 0 | 1-10 11-27 28-47 ≥ 48 All speeds | 21 1 0 0 22 | 10 0 0 0 10 | 11 0 0 0 11 | 13 0 0 0 18 | 54 0 0 0 54 | 34 0 0 0 34 | 49 4 0 0 44 | 32 26 0 0 108 | 22 30 0 0 52 | 48 68 0 0 116 | 48 39 0 0 117 | 67 33 0 0 100 | 455 231 0 0 686 |
| Port Said. (A) | 1 | 0 | 0 | 1-10 11-27 28-47 ≥ 48 All speeds | 30 6 0 0 36 | 25 5 0 0 30 | 36 7 0 0 43 | 21 14 0 0 35 | 19 15 0 0 34 | 12 3 0 0 15 | 6 3 0 0 9 | 19 9 0 0 28 | 39 88 1 0 128 | 44 137 1 0 182 | 17 61 1 0 78 | 36 41 0 0 77 | 304 389 2 0 695 |
| El Arish | 5 | 9 | 1 | 1-10 11-27 28-47 ≥ 48 All speeds | 25 0 0 0 25 | 24 0 0 0 24 | 5 0 0 0 5 | 9 0 0 0 9 | 26 0 0 0 26 | 84 0 0 0 84 | 62 0 0 0 62 | 57 3 0 0 60 | 142 51 0 0 193 | 31 34 0 0 65 | 83 15 0 0 98 | 29 1 0 0 30 | 577 104 0 0 681 |
| Ghazza. | 0 | 35 | 0 | 1-10 11-27 28-47 ≥ 48 All speeds | 13 1 0 0 14 | 17 0 0 0 17 | 13 0 0 0 13 | 15 0 0 0 15 | 33 0 0 0 33 | 119 34 0 0 153 | 63 17 0 0 80 | 33 48 0 0 81 | 19 51 7 0 77 | 43 56 0 0 99 | 40 21 0 0 61 | 18 0 0 0 18 | 426 228 7 0 661 |
| Tanta | 97 | 10 | 0 | 1-10 11-27 28-47 ≥ 48 All speeds | 19 0 0 0 19 | 17 0 0 0 17 | 51 1 0 0 52 | 0 0 0 0 0 | 47 0 0 0 47 | 10 1 0 0 11 | 19 0 0 0 19 | 90 9 0 0 99 | 106 20 0 0 126 | 88 6 0 0 94 | 69 7 0 0 66 | 38 1 0 0 39 | 544 45 0 0 589 |
| Cairo. (A) | 16 | 8 | 113 | 1-10 11-27 28-47 ≥ 48 All speeds | 22 1 0 0 23 | 41 3 0 0 44 | 29 9 0 0 38 | 34 1 0 0 35 | 23 6 0 0 29 | 6 5 0 0 11 | 13 13 0 0 26 | 53 34 0 0 87 | 44 33 0 0 77 | 45 32 0 0 77 | 41 38 0 0 79 | 25 8 0 0 33 | 376 183 0 0 559 |
| Fayoum | 77 | 0 | 0 | 1-10 11-27 28-47 ≥ 48 All speeds | 118 0 0 0 118 | 34 0 0 0 34 | 11 0 0 0 11 | 12 0 0 0 12 | 5 0 0 0 5 | 16 0 0 0 16 | 45 0 0 0 45 | 96 7 0 0 103 | 45 6 0 0 51 | 64 1 0 0 65 | 66 0 0 0 66 | 92 1 0 0 93 | 604 15 0 0 619 |

TABLE A 5 (contd.)—NUMBER IN HOURS OF OCCURRENCES OF CONCURRENT SURFACE WIND SPEED AND DIRECTION RECORDED WITHIN SPECIFIED RANGES

FEBRUARY — 1964

| Station | calm (hours) | variable (hours) | unrecorded (hours) | Wind speed in knots | Number in hours of occurrences of wind blowing from the range of direction indicated | | | | | | | | | | | | | All directions |
|---------------------|--------------|------------------|--------------------|------------------------|---|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|----------------|
| | | | | | 345 | 015 | 045 | 075 | 105 | 135 | 155 | 195 | 225 | 255 | 285 | 315 | | |
| | | | | | 014 | 044 | 074 | 104 | 134 | 164 | 194 | 224 | 254 | 284 | 314 | 344 | | |
| Minya (A) | 34 | 10 | 295 | 1-10 | 32 | 32 | 2 | 1 | 3 | 20 | 21 | 18 | 25 | 24 | 43 | 46 | 307 | |
| | | | | 11-27 | 4 | 9 | 1 | 0 | 0 | 1 | 0 | 2 | 1 | 5 | 14 | 13 | 50 | |
| | | | | 28-47 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| | | | | ≥ 48 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| | | | | All speeds | 36 | 41 | 3 | 1 | 3 | 21 | 21 | 20 | 26 | 29 | 57 | 59 | 357 | |
| Assyout | 5 | 0 | 410 | 1-10 | 5 | 5 | 4 | 1 | 2 | 2 | 0 | 2 | 2 | 13 | 36 | 51 | 123 | |
| | | | | 11-27 | 9 | 0 | 0 | 0 | 0 | 0 | 2 | 4 | 22 | 17 | 38 | 66 | 158 | |
| | | | | 28-47 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| | | | | ≥ 48 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| | | | | All speeds | 14 | 5 | 4 | 1 | 2 | 2 | 2 | 6 | 24 | 30 | 74 | 117 | 281 | |
| Luxor (A) | 34 | 0 | 17 | 1-10 | 32 | 43 | 23 | 11 | 16 | 46 | 67 | 54 | 38 | 29 | 65 | 158 | 582 | |
| | | | | 11-27 | 3 | 5 | 0 | 0 | 0 | 2 | 3 | 0 | 1 | 0 | 5 | 44 | 63 | |
| | | | | 28-47 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| | | | | ≥ 48 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| | | | | All speeds | 35 | 48 | 23 | 11 | 16 | 48 | 70 | 54 | 39 | 29 | 70 | 202 | 645 | |
| Aswan (A) | 0 | 0 | 17 | 1-10 | 246 | 70 | 4 | 2 | 0 | 3 | 2 | 2 | 2 | 11 | 38 | 136 | 516 | |
| | | | | 11-27 | 91 | 15 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 19 | 34 | 163 | |
| | | | | 28-47 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| | | | | ≥ 48 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| | | | | All speeds | 337 | 85 | 6 | 2 | 0 | 3 | 2 | 2 | 2 | 13 | 57 | 170 | 679 | |
| Siwa | 89 | 0 | 0 | 1-10 | 5 | 2 | 3 | 32 | 37 | 40 | 34 | 21 | 45 | 140 | 119 | 37 | 515 | |
| | | | | 11-27 | 0 | 0 | 0 | 0 | 2 | 1 | 16 | 4 | 2 | 25 | 38 | 3 | 91 | |
| | | | | 28-47 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | |
| | | | | ≥ 48 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| | | | | All speeds | 5 | 2 | 3 | 32 | 39 | 41 | 50 | 25 | 47 | 165 | 158 | 40 | 607 | |
| Dakhia | 34 | 1 | 0 | 1-10 | 37 | 55 | 18 | 25 | 24 | 14 | 20 | 20 | 33 | 111 | 151 | 143 | 651 | |
| | | | | 11-27 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 4 | 10 | |
| | | | | 28-47 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| | | | | ≥ 48 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| | | | | All speeds | 37 | 55 | 18 | 25 | 24 | 14 | 20 | 20 | 33 | 111 | 157 | 147 | 661 | |
| Hurghada | 0 | 3 | 2 | 1-10 | 17 | 11 | 9 | 1 | 4 | 8 | 7 | 7 | 21 | 92 | 51 | 21 | 249 | |
| | | | | 11-27 | 19 | 1 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 125 | 129 | 163 | 439 | |
| | | | | 28-47 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 3 | |
| | | | | ≥ 48 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| | | | | All speeds | 36 | 12 | 9 | 1 | 4 | 10 | 7 | 7 | 21 | 217 | 180 | 187 | 691 | |
| Quesir | 16 | 0 | 0 | 1-10 | 59 | 18 | 2 | 2 | 3 | 2 | 8 | 11 | 51 | 145 | 108 | 49 | 458 | |
| | | | | 11-27 | 22 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 8 | 85 | 101 | 222 | |
| | | | | 28-47 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| | | | | ≥ 48 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| | | | | All speeds | 81 | 18 | 2 | 2 | 3 | 2 | 8 | 11 | 57 | 153 | 193 | 150 | 680 | |

TABLE B 1.—UPPER AIR CLIMATOLOGICAL DATA

FEBRUARY — 1964

| Station | Pressure Surface (Millibar) | Altitude of Pressure Surface (gpm) | | | | Temperature (°C) | | | | Dew Point (°C) | |
|----------------------|-----------------------------|------------------------------------|---------------|---------------|---------------|------------------|--------|---------|--------|----------------|-------|
| | | N | Mean | Highest | Lowest | N | Mean | Highest | Lowest | N | Mean |
| Mersa Matruh 0000 UT | Surface | 29 | * 1012m.b. | * 1020m.b. | * 1006m.b. | 29 | 11.9 | 19.0 | 8.5 | 29 | 7.3 |
| | 1000 | 29 | 147 | 209 | 95 | 29 | 12.0 | 20.0 | 8.1 | 29 | 6.7 |
| | 850 | 29 | 1465 | 1549 | 1431 | 29 | 5.7 | 14.1 | — 0.1 | 28 | 1.7 |
| | 700 | 29 | 3052 | 3128 | 2969 | 29 | — 4.2 | 2.3 | —16.7 | 14 | —12.6 |
| | 600 | 29 | 4299 | 4338 | 4147 | 29 | — 10.3 | — 5.4 | —16.9 | 11 | —18.9 |
| | 500 | 29 | 5631 | 5738 | 5497 | 29 | —22.3 | —15.3 | —27.1 | 10 | —29.0 |
| | 400 | 29 | 7148 | 7378 | 7067 | 29 | —33.7 | —26.8 | —39.0 | 5 | —37.2 |
| | 300 | 29 | 9211 | 9378 | 9054 | 29 | —45.1 | —37.9 | —48.7 | — | — |
| | 200 | 29 | 11904 | 12046 | 11677 | 29 | —52.6 | —43.2 | —63.0 | — | — |
| | 150 | 27 | 13702 | 13892 | 13596 | 27 | —55.5 | —49.1 | —61.5 | — | — |
| | 100 | 26 | 16236 | 16430 | 16084 | 26 | —64.8 | —59.5 | —69.7 | — | — |
| | 70 | 14 | 18447 | 18670 | 18260 | 14 | —64.8 | —59.4 | —71.6 | — | — |
| | 50 | 10 | 20508 | 20774 | 20335 | 10 | —61.7 | —56.9 | —69.3 | — | — |
| | 30 | 7 | 23767 | 24042 | 23577 | 7 | —53.3 | —50.8 | —56.4 | — | — |
| | 20 | 5 | 26418 | 26677 | 26175 | 5 | —50.1 | —49.7 | —51.5 | — | — |
| | 10 | — | — | — | — | — | — | — | — | — | — |
| Helwan 0000 UT | Surface | 29 | * 1000m.b. | * 1007m.b. | * 994m.b. | 29 | 10.6 | 15.3 | 7.5 | 29 | 3.3 |
| | 1000 | 29 | 142 | 198 | 92 | 16 | 10.4 | 13.9 | 7.6 | 16 | 2.6 |
| | 850 | 29 | 1489 | 1538 | 1429 | 29 | 4.8 | 12.1 | — 1.2 | 27 | — 3.0 |
| | 700 | 29 | 3051 | 3128 | 2970 | 29 | — 2.2 | 3.2 | — 9.2 | 14 | —13.6 |
| | 600 | 29 | 4260 | 4358 | 4146 | 29 | — 8.9 | — 2.4 | —15.6 | 7 | —21.1 |
| | 500 | 29 | 5647 | 5763 | 5515 | 29 | —17.9 | —14.0 | —24.8 | 3 | —29.4 |
| | 400 | 29 | 7277 | 7419 | 7099 | 29 | —30.7 | —26.4 | —36.8 | 3 | —37.2 |
| | 300 | 29 | 9263 | 9429 | 9076 | 29 | —43.8 | —33.8 | —48.8 | — | — |
| | 200 | 28 | 11940 | 12067 | 11732 | 28 | —52.2 | —45.0 | —60.1 | — | — |
| | 150 | 28 | 13772 | 13937 | 13560 | 28 | —59.1 | —54.0 | —64.5 | — | — |
| | 100 | 26 | 16281 | 16422 | 16166 | 26 | —65.7 | —55.4 | —70.9 | — | — |
| | 70 | 23 | 18457 | 18540 | 18350 | 23 | —64.6 | —60.6 | —68.4 | — | — |
| | 50 | 20 | 20517 | 20612 | 20380 | 20 | —60.1 | —57.0 | —64.8 | — | — |
| | 30 | 13 | 23747 | 23842 | 23607 | 13 | —63.8 | —49.5 | —57.8 | — | — |
| | 20 | 6 | 26373 | 26480 | 26234 | 6 | —48.9 | —46.8 | —51.5 | — | — |
| | 10 | — | — | — | — | — | — | — | — | — | — |
| Aswan. 0000 UT | Surface | 29 | * 992m.b. | * 997 m.b. | * 986m.b. | 29 | 11.4 | 19.6 | 6.7 | 29 | — 3.1 |
| | 1000 | — | — | — | — | — | — | — | — | — | — |
| | 850 | 29 | 1475 | 1506 | 1420 | 29 | 7.4 | 18.5 | 0.3 | 21 | — 7.6 |
| | 700 | 29 | 3056 | 3123 | 2996 | 29 | 1.7 | 11.2 | — 4.6 | 3 | —13.2 |
| | 600 | 29 | 4282 | 4390 | 4205 | 29 | — 5.1 | 3.2 | —11.9 | 4 | —16.2 |
| | 500 | 29 | 5689 | 5840 | 5593 | 29 | —13.9 | — 7.5 | —20.6 | 4 | —25.5 |
| | 400 | 29 | 7345 | 7536 | 7233 | 29 | —24.7 | —18.5 | —31.1 | 4 | —34.8 |
| | 300 | 29 | 9387 | 9643 | 9259 | 29 | —37.4 | —29.3 | —42.0 | — | — |
| | 200 | 29 | 12221 | 12415 | 11911 | 29 | —53.2 | —49.5 | —63.0 | — | — |
| | 150 | 28 | 13859 | 14250 | 13643 | 28 | —67.4 | —58.9 | —74.8 | — | — |
| | 100 | 25 | 16268 | 16717 | 16063 | 25 | —74.6 | —66.7 | —80.0 | — | — |
| | 70 | 10 | 18320 | 18490 | 18217 | 10 | —71.9 | —69.7 | —78.1 | — | — |
| | 50 | 10 | 20330 | 20496 | 20222 | 10 | —66.9 | —61.5 | —69.3 | — | — |
| | 30 | — | — | — | — | — | — | — | — | — | — |
| | 20 | — | — | — | — | — | — | — | — | — | — |
| | 10 | — | — | — | — | — | — | — | — | — | — |

N — The number of cases the element has been observed during the month.

* The atmospheric pressure corrected to the elevation of the radiosonde stations.

TABLE B 1 (contd.).—UPPER AIR CLIMATOLOGICAL DATA
FEBRUARY — 1964

| Station | Pressure Surface Millibar | Altitude of Pressure Surface (gpm) | | | | Temperature (°C) | | | | Dew Point (°C) | |
|------------------------|---------------------------|------------------------------------|----------|----------|----------|------------------|-------|---------|--------|----------------|-------|
| | | N. | Mean | Highest | Lowest | N | Mean | Highest | Lowest | N | Mean |
| Mersa Matrnh 1200 U.T. | Surface | 29 | * | * | * | 29 | 16.6 | 22.8 | 13.5 | 29 | 8.1 |
| | 1000 | 29 | 1013m.b. | 1020m.b. | 1004m.b. | 29 | 15.5 | 21.7 | 11.8 | 29 | 7.1 |
| | 850 | 29 | 151 | 211 | 79 | 29 | 4.5 | 11.4 | -1.0 | 29 | -4.2 |
| | 700 | 29 | 1501 | 1550 | 1470 | 29 | -3.4 | 2.1 | -10.5 | 16 | -14.0 |
| | 600 | 29 | 3059 | 3124 | 2969 | 29 | -9.7 | -2.6 | -18.5 | 10 | -18.9 |
| | 500 | 29 | 4262 | 4340 | 4144 | 29 | -20.2 | -14.5 | -27.3 | 6 | -28.6 |
| | 400 | 29 | 5640 | 5735 | 5481 | 29 | -31.7 | -25.3 | -41.4 | 4 | -32.6 |
| | 300 | 29 | 7256 | 7385 | 7055 | 29 | -44.7 | -33.0 | -48.0 | — | — |
| | 200 | 29 | 9231 | 9395 | 9014 | 29 | -52.5 | -45.0 | -57.8 | — | — |
| | 150 | 28 | 11885 | 12119 | 11708 | 28 | -56.7 | -50.0 | -66.2 | — | — |
| | 100 | 25 | 13848 | 13964 | 13545 | 25 | -63.5 | -57.0 | -70.5 | — | — |
| | 70 | 13 | 16268 | 16477 | 16127 | 13 | -64.4 | -56.6 | -71.9 | — | — |
| | 50 | 5 | 18461 | 18649 | 18300 | 5 | -57.7 | -55.1 | -58.8 | — | — |
| | 30 | — | 20576 | 20722 | 20388 | — | — | — | — | — | — |
| | 20 | — | — | — | — | — | — | — | — | — | — |
| | 10 | — | — | — | — | — | — | — | — | — | — |
| Helwan 1200 U.T. | Surface | 29 | * | * | * | 29 | 18.5 | 26.0 | 13.6 | 29 | 2.6 |
| | 1000 | 29 | 997m.b. | 1005m.b. | 994m.b. | 14 | 17.4 | 21.4 | 13.3 | 14 | 2.5 |
| | 850 | 29 | 134 | 183 | 92 | 29 | 5.5 | 15.0 | -0.6 | 25 | -4.4 |
| | 700 | 29 | 1485 | 1541 | 1417 | 29 | -2.6 | 4.8 | -10.2 | 15 | -17.2 |
| | 600 | 29 | 3051 | 3111 | 2980 | 29 | -8.9 | -4.5 | -15.8 | 5 | -20.3 |
| | 500 | 29 | 4260 | 4343 | 4168 | 29 | -17.9 | -12.6 | -26.6 | 7 | -26.8 |
| | 400 | 28 | 5647 | 5753 | 5514 | 28 | -29.5 | -23.3 | -38.3 | 3 | -34.1 |
| | 300 | 28 | 7284 | 7405 | 7137 | 28 | -42.9 | -31.2 | -47.2 | — | — |
| | 200 | 28 | 9279 | 9448 | 9088 | 28 | -52.8 | -44.7 | -60.8 | — | — |
| | 150 | 28 | 11950 | 12109 | 11720 | 28 | -58.0 | -54.0 | -63.5 | — | — |
| | 100 | 25 | 13797 | 13949 | 13554 | 25 | -65.1 | -58.3 | -71.0 | — | — |
| | 70 | 22 | 16322 | 16466 | 16105 | 22 | -64.3 | -57.1 | -69.0 | — | — |
| | 50 | 18 | 18506 | 18760 | 18290 | 18 | -59.8 | -55.7 | -64.5 | — | — |
| | 30 | 5 | 20594 | 20819 | 20406 | 5 | -50.9 | -44.0 | -54.0 | — | — |
| | 20 | — | 23849 | 23915 | 23800 | — | — | — | — | — | — |
| | 10 | — | — | — | — | — | — | — | — | — | — |
| Awan 1200 U.T. | Surface | 29 | * | * | * | 29 | 22.8 | 28.0 | 17.7 | 29 | 0.1 |
| | 1000 | — | 991m.b. | 997m.b. | 986m.b. | — | — | — | — | — | — |
| | 850 | 29 | 1495 | 1527 | 1439 | 29 | 10.5 | 14.9 | 3.4 | 17 | -9.7 |
| | 700 | 29 | 3093 | 3177 | 3026 | 29 | 4.3 | 8.8 | -3.0 | 3 | -11.4 |
| | 600 | 29 | 4332 | 4387 | 4254 | 29 | -2.6 | 1.6 | -8.1 | 4 | -17.6 |
| | 500 | 29 | 5755 | 5828 | 5651 | 29 | -11.3 | -3.7 | -16.7 | 2 | -23.8 |
| | 400 | 29 | 7433 | 7548 | 7311 | 29 | -21.7 | -12.4 | -27.0 | 4 | -32.0 |
| | 300 | 29 | 9498 | 9707 | 9341 | 29 | -34.8 | -23.0 | -40.3 | 3 | -40.5 |
| | 200 | 26 | 12221 | 12580 | 12018 | 26 | -53.2 | -39.0 | -58.7 | — | — |
| | 150 | 23 | 14005 | 14128 | 13804 | 23 | -65.0 | -57.9 | -70.4 | — | — |
| | 100 | 20 | 16448 | 16552 | 16277 | 20 | -71.9 | -62.6 | -84.2 | — | — |
| | 70 | 7 | 18448 | 18552 | 18277 | 7 | -71.2 | -67.6 | -79.8 | — | — |
| | 50 | 2 | 18535 | 18680 | 18410 | 2 | -63.6 | -60.2 | -67.0 | — | — |
| | 30 | — | 20638 | 20746 | 20530 | — | — | — | — | — | — |
| | 20 | — | — | — | — | — | — | — | — | — | — |
| | 10 | — | — | — | — | — | — | — | — | — | — |

N = The number of cases the element has been observed during the month.

* The atmospheric pressure corrected to the elevation of the radiosonde stations.

**TABLE B 2.—MEAN AND EXTREME VALUES OF THE FREEZING LEVEL AND THE TROPOPAUSE ;
THE HIGHEST WIND SPEED IN THE UPPER AIR**

FEBRUARY—1964

| Station | Freezing Level | | | | | | | | | First Tropopause | | | | | | | | | Highest wind speed | | | |
|-----------|------------------------------|----------------|----------------|----------------|----------------|----------------|-----------------|----------------|----------------|------------------|----------------|------------------|-----------------|----------------|------------------|-----------------|----------------|------------------|--------------------|----------------|----------------------|----------------|
| | Mean | | | Highest | | | Lowest | | | Mean | | | Highest | | | Lowest | | | Altitude (g pm) | Pressure (mb.) | Direction (000—360)° | Speed in Knots |
| | Altitude (gpm) | Pressure (mb.) | Dew point (°C) | Altitude (gpm) | Pressure (mb.) | Dew Point (°C) | Altitude (g pm) | Pressure (mb.) | Dew Point (°C) | Altitude (gpm) | pressure (mb.) | Temperature (°C) | Altitude (g pm) | Pressure (mb.) | Temperature (°C) | Altitude (g pm) | Pressure (mb.) | Temperature (°C) | | | | |
| 0000 U.T. | (N) | (N) | (N) | | | | | | | (N) | (N) | (N) | | | | | | | | | | |
| | M. Matruh . . . 2193 (29) | 788 (29) | -4.7 (24) | 3450 | 672 | — | 1490 | 852 | -6.5 | 10499 (28) | 242 (28) | -59.5 (28) | 13700 | 154 | -70.4 | 8480 | 336 | -41.2 | 10600 | 244 | 290 | 130 |
| | Helwan . . . 2535 (29) | 749 (29) | -6.1 (17) | 3600 | 657 | — | 1400 | 845 | -3.3 | 11255 (27) | 236 (27) | -52.8 (27) | 16340 | 100 | -69.1 | 8300 | 343 | -38.0 | 9900 | 272 | 280 | 140 |
| 1200 U.T. | Aswan . . . 3136 (29) | 686 (29) | -14.2 (8) | 4780 | 570 | -12.6 | 1410 | 854 | -9.7 | 13997 (22) | 146 (22) | -68.6 (22) | 15580 | 110 | -74.0 | 12200 | 192 | -64.7 | 7200 | 404 | 240 | 166 |
| | (N) | (N) | (N) | | | | | | | (N) | (N) | (N) | | | | | | | | | | |
| | M. Matruh . . . 2288 (29) | 773 (29) | -5.0 (25) | 3650 | 653 | — | 1400 | 862 | -5.8 | 10442 (29) | 242 (29) | -52.7 (29) | 15080 | 122 | -66.8 | 8210 | 337 | -46.7 | 9300 | 293 | 260 | 145 |
| 1800 U.T. | Helwan . . . 2474 (29) | 754 (29) | -8.1 (15) | 3770 | 645 | — | 1410 | 860 | -4.3 | 11163 (27) | 234 (27) | -54.0 (27) | 16383 | 100 | -68.4 | 7252 | 400 | -32.4 | 7400 | 393 | 260 | 140 |
| | Aswan . . . 3881 (29) | 640 (29) | -16.1 (5) | 5670 | 576 | — | 1800 | 818 | — | 14849 (18) | 132 (18) | -67.9 (18) | 16580 | 96 | -69.9 | 12480 | 183 | -59.7 | 11800 | 223 | 250 | 160 |

N = The number of cases the element has been observed during the month

TABLE B 3.—NUMBER OF OCCURRENCES OF WIND DIRECTION WITHIN SPECIFIED RANGES AND THE MEAN SCALAR WIND SPEED AT THE STANDARD AND SELECTED PRESSURE SURFACES.

MERSA MATRUH (A)—FEBRUARY 1964

| Time | Pressure Surface Millibar | Wind between ranges of direction (000-360)° | | | | | | | | | | | | | | | | | | | | | | | | Number of calm winds | Total number of observations (TN) | Mean scalar wind speed (knots) |
|-----------|------------------------------|---|-----------|-----|-----------|-----|-----------|-----|-----------|-----|-----------|-----|-----------|-----|-----------|-----|-----------|-----|-----------|-----|-----------|-----|-----------|-----|-----------|-------------------------|--------------------------------------|-----------------------------------|
| | | 345 | | 015 | | 045 | | 075 | | 105 | | 135 | | 165 | | 195 | | 225 | | 255 | | 285 | | 315 | | | | |
| | | 014 | | 044 | | 074 | | 104 | | 134 | | 164 | | 194 | | 224 | | 254 | | 284 | | 314 | | 344 | | | | |
| | | N | (ff) m | N | (ff) m | N | (ff) m | N | (ff) m | N | (ff) m | N | (ff) m | N | (ff) m | N | (ff) m | N | (ff) m | N | (ff) m | N | (ff) m | N | (ff) m | | | |
| 0000 U.T. | Surface | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 4 | 17 | 3 | 11 | 2 | 6 | 5 | 17 | 9 | 13 | 3 | 17 | 2 | 20 | 1 | 29 | 14 |
| | 1000 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 4 | 17 | 3 | 11 | 2 | 6 | 5 | 17 | 9 | 13 | 3 | 17 | 3 | 14 | 0 | 29 | 14 |
| | 850 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 2 | 13 | 1 | 23 | 4 | 16 | 10 | 26 | 9 | 21 | 3 | 17 | 0 | 29 | 21 |
| | 700 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 8 | 28 | 15 | 28 | 6 | 34 | 0 | — | 0 | 29 | 29 |
| | 600 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 1 | 16 | 9 | 41 | 12 | 35 | 5 | 28 | 0 | — | 0 | 27 | 35 |
| | 500 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 1 | 39 | 8 | 53 | 12 | 49 | 5 | 37 | 0 | — | 0 | 26 | 46 |
| | 400 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 6 | 64 | 10 | 49 | 5 | 53 | 0 | — | 0 | 21 | 54 |
| | 300 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 2 | 76 | 6 | 68 | 4 | 55 | 1 | 31 | 0 | 13 | 62 |
| | 200 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 1 | 62 | 3 | 80 | 1 | 30 | 0 | — | 0 | 5 | 66 |
| | 150 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 2 | 80 | 0 | — | 0 | — | 0 | — | 0 | 2 | 80 |
| | 100 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| | 70 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| | 60 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| | 50 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| | 40 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| 30 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | |
| 20 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | |
| 10 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | |
| 1200 U.T. | Surface | 1 | 5 | 1 | 6 | 0 | — | 1 | 13 | 0 | — | 0 | — | 0 | — | 3 | 25 | 1 | 24 | 9 | 13 | 6 | 18 | 7 | 14 | 0 | 29 | 15 |
| | 1000 | 0 | — | 1 | 6 | 0 | — | 1 | 13 | 0 | — | 0 | — | 0 | — | 3 | 25 | 1 | 24 | 9 | 12 | 7 | 18 | 7 | 14 | 0 | 29 | 15 |
| | 850 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 1 | 5 | 4 | 22 | 6 | 21 | 7 | 16 | 11 | 21 | 0 | — | 0 | 29 | 20 |
| | 700 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 1 | 16 | 7 | 31 | 10 | 26 | 11 | 33 | 0 | — | 0 | 29 | 30 |
| | 600 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 2 | 32 | 7 | 34 | 12 | 32 | 8 | 46 | 0 | — | 0 | 29 | 37 |
| | 500 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 1 | 34 | 6 | 57 | 15 | 42 | 5 | 66 | 0 | — | 0 | 27 | 49 |
| | 400 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 5 | 62 | 10 | 54 | 3 | 53 | 1 | 16 | 0 | 19 | 54 |
| | 300 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 3 | 45 | 8 | 79 | 3 | 69 | 0 | — | 0 | 14 | 70 |
| | 200 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 3 | 87 | 1 | 58 | 0 | — | 0 | 4 | 82 |
| | 150 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| | 100 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| | 70 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| | 60 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| | 50 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| | 40 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| 30 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | |
| 20 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | |
| 10 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | |

N = The number of cases the element has been observed during the month.

TN = The total number of cases the wind has been observed for all directions during the month.

TABLE B 3 (contd.)—NUMBER OF OCCURRENCES OF WIND DIRECTION WITHIN SPECIFIED RANGES AND THE MEAN SCALAR WIND SPEED AT THE STANDARD AND SELECTED PRESSURE SURFACES.

HELWAN—FEBRUARY 1964

| Time | Pressure Surface (Millibar.) | Wind between ranges of direction (000—360)° | | | | | | | | | | | | | | | | | | | | Number of Calm winds | Total Number of Observations (T N) | Mean Sealar wind Speed (Knots) | | | | |
|-----------|---------------------------------|---|-----------|-----------------|-----------|-----------------|-----------|-----------------|-----------|-----------------|-----------|-----------------|-----------|-----------------|-----------|-----------------|-----------|-----------------|-----------|-----------------|-----------|-------------------------|---------------------------------------|-----------------------------------|-----------------|-----------|-----------------|-----------|
| | | 345 / 014 | | 015 / 044 | | 045 / 074 | | 075 / 104 | | 105 / 134 | | 135 / 164 | | 165 / 194 | | 195 / 224 | | 225 / 254 | | 255 / 284 | | | | | 285 / 311 | | 315 / 344 | |
| | | N | (ff) m | N | (ff) m | N | (ff) m | N | (ff) m | N | (ff) m | N | (ff) m | N | (ff) m | N | (ff) m | N | (ff) m | N | (ff) m | | | | N | (ff) m | N | (ff) m |
| 0000 U.T. | Surface | 2 | 8 | 6 | 8 | 3 | 10 | 3 | 11 | 0 | — | 1 | 7 | 0 | — | 1 | 8 | 1 | 13 | 2 | 8 | 0 | — | 1 | 5 | 9 | 29 | 6 |
| | 1000 | 4 | 6 | 2 | 11 | 4 | 9 | 1 | 12 | 0 | — | 1 | 1 | 0 | — | 1 | 8 | 0 | — | 0 | — | 2 | 4 | 0 | — | 1 | 16 | 7 |
| | 850 | 2 | 10 | 0 | — | 0 | — | 1 | 3 | 0 | — | 1 | 5 | 2 | 12 | 4 | 15 | 2 | 12 | 6 | 23 | 7 | 19 | 5 | 19 | 0 | 29 | 17 |
| | 700 | 1 | 11 | 0 | — | 0 | — | 0 | — | 0 | — | 1 | 5 | 0 | — | 0 | — | 7 | 25 | 8 | 28 | 9 | 25 | 3 | 18 | 0 | 29 | 24 |
| | 600 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 2 | 14 | 3 | 45 | 14 | 34 | 8 | 34 | 2 | 22 | 0 | 29 | 33 |
| | 500 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 1 | 8 | 4 | 50 | 15 | 43 | 7 | 45 | 2 | 39 | 0 | 29 | 42 |
| | 400 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 2 | 68 | 16 | 61 | 6 | 51 | 3 | 31 | 0 | 27 | 56 |
| | 300 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 1 | 18 | 15 | 73 | 3 | 47 | 2 | 54 | 0 | 21 | 65 |
| | 200 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 1 | 111 | 6 | 82 | 2 | 107 | 0 | — | 0 | 9 | 91 |
| | 150 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 4 | 90 | 2 | 86 | 0 | — | 0 | 6 | 88 |
| | 100 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 3 | 108 | 0 | — | 0 | — | 0 | 3 | 108 |
| | 70 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| | 60 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| 50 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | |
| 40 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | |
| 30 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | |
| 20 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | |
| 10 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | |
| 1200 U.T. | Surface | 4 | 8 | 2 | 10 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 3 | 8 | 4 | 9 | 8 | 10 | 4 | 12 | 1 | 9 | 3 | 29 | 9 |
| | 1000 | 4 | 12 | 3 | 8 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 1 | 5 | 2 | 14 | 2 | 10 | 1 | 9 | 1 | 14 | 10 |
| | 850 | 6 | 12 | 2 | 8 | 1 | 8 | 0 | — | 1 | 5 | 0 | — | 2 | 12 | 2 | 20 | 1 | 19 | 10 | 14 | 1 | 16 | 2 | 14 | 1 | 29 | 13 |
| | 700 | 2 | 37 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 2 | 11 | 2 | 26 | 5 | 22 | 7 | 39 | 7 | 26 | 4 | 23 | 0 | 29 | 26 |
| | 600 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 2 | 36 | 7 | 36 | 6 | 54 | 12 | 31 | 2 | 54 | 0 | 29 | 39 |
| | 500 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 2 | 26 | 8 | 68 | 9 | 53 | 8 | 33 | 1 | 46 | 0 | 28 | 49 |
| | 400 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 4 | 68 | 13 | 62 | 5 | 45 | 1 | 128 | 0 | 23 | 63 |
| | 300 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 1 | 34 | 1 | 18 | 9 | 68 | 2 | 68 | 1 | 67 | 0 | 14 | 62 |
| | 200 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 2 | 108 | 5 | 92 | 1 | 86 | 0 | — | 0 | 8 | 96 |
| | 150 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 1 | 110 | 0 | — | 1 | 80 | 0 | — | 0 | 2 | 96 |
| | 100 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| | 70 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| | 60 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| 50 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | |
| 40 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | |
| 30 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | |
| 20 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | |
| 10 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | |

N = The number of cases the element has been observed during the month.

TN = The total number of cases the wind has been observed for all directions during the month.

**TABLE B 3 (contd.)—NUMBER OF OCCURRENCES OF WIND DIRECTION WITHIN SPECIFIED RANGES AND
THE MEAN SCALAR WIND SPEED AT THE STANDARD AND SELECTED PRESSURE SURFACES.**

ASWAN (A)—FEBRUARY 1964

| Time | Pressure Surface (Millibar) | Wint between ranges of direction (000—360) | | | | | | | | | | | | | | | | | | | | Number of calm winds | Total number of observations (T N) | Mean Sealar wind Speed (Knots) | | | | |
|--------------|--------------------------------|--|----|-----------------|----|-----------------|----|-----------------|----|-----------------|---|-----------------|---|-----------------|---|-----------------|----|-----------------|-----|-----------------|----|-------------------------|---------------------------------------|-----------------------------------|-----------------|----|-----------------|---|
| | | 345 / 014 | | 015 / 044 | | 045 / 074 | | 075 / 104 | | 105 / 134 | | 135 / 164 | | 165 / 194 | | 195 / 224 | | 225 / 254 | | 255 / 284 | | | | | 285 / 314 | | 315 / 344 | |
| | | (ff) | | (ff) | | (ff) | | (ff) | | (ff) | | (ff) | | (ff) | | (ff) | | (ff) | | (ff) | | | | | (ff) | | (ff) | |
| | | N | m | N | m | N | m | N | m | N | m | N | m | N | m | N | m | N | m | N | m | | | | N | m | N | m |
| 0000 U.T. | Surface | 20 | 13 | 0 | — | 2 | 8 | 1 | 12 | 0 | — | 0 | — | 0 | — | 0 | — | 1 | 9 | 0 | — | 4 | 9 | 1 | 29 | 11 | | |
| | 1000 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | | | |
| | 850 | 4 | 16 | 2 | 13 | 0 | — | 2 | 13 | 0 | — | 0 | — | 1 | 3 | 0 | — | 3 | 9 | 4 | 9 | 8 | 17 | 5 | 14 | 29 | 13 | |
| | 700 | 3 | 22 | 1 | 9 | 1 | 3 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 8 | 26 | 11 | 26 | 4 | 28 | 1 | 17 | 29 | 24 | |
| | 600 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 1 | 35 | 6 | 46 | 15 | 39 | 3 | 24 | 4 | 34 | 0 | 29 | |
| | 500 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 8 | 51 | 15 | 59 | 6 | 44 | 0 | — | 0 | 29 | |
| | 400 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 7 | 69 | 17 | 69 | 2 | 94 | 0 | — | 0 | 26 | |
| | 300 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 3 | 68 | 17 | 77 | 1 | 110 | 0 | — | 0 | 21 | |
| | 200 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 5 | 75 | 6 | 87 | 0 | — | 0 | — | 0 | 11 | |
| | 150 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 3 | 79 | 4 | 88 | 0 | — | 0 | — | 0 | 7 | |
| | 100 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 3 | 64 | 0 | — | 0 | — | 0 | 3 | |
| | 70 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | |
| | 60 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | |
| | 50 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | |
| 40 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | | |
| 30 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | | |
| 20 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | | |
| 10 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | | |
| 1200 U.T. | Surface | 20 | 12 | 2 | 12 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 1 | 13 | 2 | 16 | 2 | 13 | 2 | 29 | 11 | | |
| | 1000 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | | |
| | 850 | 4 | 14 | 3 | 10 | 2 | 12 | 0 | — | 1 | 7 | 1 | 6 | 0 | — | 0 | — | 1 | 16 | 4 | 19 | 7 | 14 | 6 | 19 | 0 | 29 | |
| | 700 | 1 | 24 | 1 | 11 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 1 | 63 | 4 | 23 | 16 | 24 | 1 | 9 | 5 | 23 | 0 | 29 | |
| | 600 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 12 | 46 | 10 | 34 | 6 | 42 | 1 | 17 | 0 | 29 | |
| | 500 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 7 | 49 | 18 | 53 | 2 | 34 | 1 | 30 | 0 | 28 | |
| | 400 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 5 | 84 | 18 | 65 | 2 | 30 | 0 | — | 0 | 25 | |
| | 300 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 5 | 105 | 10 | 85 | 3 | 83 | 0 | — | 0 | 18 | |
| | 200 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 5 | 123 | 3 | 92 | 1 | 110 | 0 | — | 0 | 9 | |
| | 150 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 1 | 88 | 1 | 63 | 0 | — | 0 | — | 0 | 2 | |
| | 100 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | |
| | 70 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | |
| | 60 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | |
| | 50 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | |
| 40 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | | |
| 30 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | | |
| 20 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | | |
| 10 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | | |

N = The number of cases the element has been observed during the month.

TN = The total number of cases the wind has been observed for all directions during the month.

REVIEW OF AGRO-METEOROLOGICAL STATION AT EL-KASR

FEBRUARY 1964

This month was mild but rather humid and wet. It was characterized by successive cold waves which prevailed during the first two weeks with the peaks on the 4th. and 9th, when the lowest maximum air temperature was recorded (3.6 °C below normal) with the highest value of relative humidity on the first day (32 % above normal) and the lowest Piche evaporation on the second (5.9 mms. below normal).

The absolute minimum air temperature was associated with this system and occurred on the 11th (3.5 °C below normal) as well as the minima of soil temperatures at depths 0.3, 1 and 2 cms. The minima for depths 5, 10 and 20 cms. were observed on the 7th and 9th.

A pronounced warm spell though of short duration was remarked towards the end of the month, with the peak on the 26th, when the absolute maximum of air temperature was recorded (5.7 °C above normal) and also the highest value of Piche evaporation (11.1 mms. above normal) as well as evaporation from pan class A, being 16.23 mms. On the next day, the highest minimum air temperature (4.1 °C above normal) and the maximum soil temperatures for depths 10 and 20 cms. took place, while those at depths 0.3, 1, 2 and 5 cms. occurred on the 29th.

The means of maximum air temperature, minimum and mean of day were all about normal, while the mean relative humidity was 9% above normal and the mean Piche evaporation was 2.0 mms. below normal. The total amount of rainfall was 39.1 mms. (20.5 mms. above normal).

REVIEW OF AGRO-METEOROLOGICAL STATION AT TAHRIR

FEBRUARY 1964

This month—compared with February 1963—was colder and drier, besides having much less rainfall.

It was distinguished by a cold wave prevailing during the first ten days of the month, giving the lowest maximum temperature on the 4th. and the absolute minima of air temperatures both at 2 metres and 5 cms. above dry soil on the 8th.

A warm spell of short duration started on the 16th when the lowest value of relative humidity was observed (19%) and that of the vapour pressure on the next day. Also the absolute maximum air temperature was recorded on the 21st.

The mean air temperature, vapour pressure, relative humidity, mean Piche and pan A evaporation were less than their corresponding values of last year by 1.7 °C, 0.7 mms., 5%, 1.2 mm. and 0.42 mm. respectively. Rainfall was 2.8 mms. which is 12.0 mms. less than last February.

On the other hand, the mean wind speed at 2 metres was only 0.1 m/sec. more than last year, and there was practically no difference between actual sunshine durations in both years.

Maximum soil temperatures recorded this month, between the surface and 1 metre depth, were higher in the first 2 cms. by no more than 2.3 °C, deeper they were less by 0.7 to 1.6 °C except at 10 cms. depth, where the maxima were identical. The minima were less in the whole series by 0.7 to 2.3 °C.

REVIEW OF AGRO—METEOROLOGICAL STATION AT GIZA

FEBRUARY 1964

This month was rather cold and dry as compared with the normal values for air temperature, relative humidity, piche evaporation and total amount of rainfall at Giza.

The month was characterized by one prolonged cold wave, two other minor cold waves; and two minor warm spells.

The first cold wave was experienced between the 1st and 10th, giving the lowest maximum air temperature of the month : 17.0°C on the 4th. (3.4°C below normal) when the minimum range of temperature (the difference between maximum and minimum air temperatures) attained 8.6°C . Moreover this wave was associated with, the absolute minimum air temperature at 2 metres (3.4°C on the 7th i.e. 2.7°C below normal), the absolute minimum air temperature at 5 cms above wet soil together with the absolute minima of the soil temperatures for the surface layer down to 10 cms. depth through the dry and wet fields. During this wave, the air temperature at 5 cms. above the grass field fell below 0°C on the 7th, 8th 9th, and 10th for two hours during the first three and for one hour in the fourth day when the temperatures were -1.2 , -1.4 , -1.2 and -0.6°C respectively.

The second cold wave was of short duration and lasted between 12th and 15th. During this wave, the absolute minima for soil temperatures for the grass field at depths 1, 2, 5 and 10 cms. were recorded, also the absolute minimum air temperatures at 5 cms. above dry and grass fields were recorded on the 15th being -1.0 and -2.4°C respectively.

Above the grass field, the minimum air temperature fell below 0°C on the 14th (-0.3°C) and 15th (-2.4°C being the absolute minimum for the whole month) with duration below the freezing point for 0.5 and 2.5 hours respectively, while the minima for soil temperatures at depths 1 to 5 cms. showed their absolute values on the 15th.

The warm spell was of short duration (26th — 28th) giving the absolute maximum of air temperature at two metres above the ground : 27.9°C (5.6°C above normal) on the 27th. Also the absolute maximum for soil temperatures over the dry and wet fields at most of the depths occurred during this spell.

A diffused warm spell prevailed during the 16th and 17th giving the largest range of air temperature at 2 metres for the month being 19.7°C , as well as the lowest relative humidity : 20% (47% below normal) and the maximum Piche evaporation in the screen : 9.9 mms. (5.7 mms. above normal).

The mean air temperature at 2 metres above ground was below normal (-1.0°C), the mean relative humidity was below normal (-7%) and the total amount of rainfall for the whole month was traces against 4 mms. for the normal value.

Compared with February 1963, the absolute minimum air temperatures at 5 cms. over the dry and wet soils and above grass were all slightly less by 0.5, 1.3 and 0.6°C respectively. Also the minimum soil temperatures at the different depths were generally lower for the three fields, where the means for the surface wind speeds at 2 metres were slightly higher. The total actual duration of bright sunshine was more by 11.4 hours and amounts to 72% of the total possible duration. The mean evaporation of the day (pan class A), total potential evaporation and total potential evapotranspiration were all higher by 0.22, 14.9 and 10.3 mms. respectively.

TABLE 3. AIR TEMPERATURE AT 2 METRES ABOVE GROUND

REVIEW OF AGRO-METEOROLOGICAL STATION AT KHARGA

FEBRUARY 1964

The month was slightly colder and drier as compared with the normal values of air temperature and relative humidity at 2 metres above ground level.

Minor successive cold waves prevailed during the first two weeks during which the maxima and minima of air temperature were below normal for most of the days.

The first cold wave was the most pronounced, while the lowest maximum air temperature was recorded on the 6th (5.2°C below normal). The absolute minima of soil temperatures at depths 1, 2, 3 and 5 cms. in the dry field occurred on the 8th and also the lowest values of vapour pressure at 1200 U.T. and the Piche evaporation in the screen (1.3 mms. below normal), and in the free air at one cm. above ground level as well as evaporation from pan class A. On the next day, the absolute minima of air temperatures at 2 metres above ground level (5°C below normal) and at 5 cms. took place as well as those for the soil at depths 10, 20 and 50 cms. The highest minimum air temperature at 2 metres above ground level (5.0°C above normal) and at 5 cms. took place on the 12th at the end of this cold wave.

This month was also characterized by a warm spell starting on the 25th with the peak on the 27th when the absolute maximum (5.4°C above normal) and the maxima of soil temperatures at depths 1, 2, 3 and 5 cms. in the dry field were recorded as well as the lowest value of the relative humidity at 1200 U.T. (11% below normal). On the next day, the maximum soil temperature at 10 cms. depth, the lowest daily mean relative humidity for the month and the highest value of evaporation from pan class A were observed while those of Piche in the in the screen (11.0 mms. above normal) and in the free air at levels 120, 60 and 1 cms. occurred on the 25th. The highest values of soil temperatures at depths 20, 50 and 100 cms. and vapour pressure at 1200 U.T. were recorded on the last day of the month.

TABLE 3. (SOLAR RAY) RADIATION DURATION OF BRIGHT SUNSHINE (HOURS)

HUMIDITY, VAPOUR PRESSURE AT 2 METRES ABOVE GROUND, EVAPORATION

FEBRUARY 1964

| Station | Date | Relative Humidity (%) | | Vapour Pressure (mm Hg) | | Evaporation (mm) | | Solar Radiation (Hrs) | | Sunshine (Hrs) | |
|---------|------|-----------------------|---------|-------------------------|---------|------------------|-------|-----------------------|---------|----------------|---------|
| | | 1200 U.T. | 24 Hrs. | 1200 U.T. | 24 Hrs. | Piche | Pan A | 1200 U.T. | 24 Hrs. | 1200 U.T. | 24 Hrs. |
| El Khar | 1 | 31.0 | 25.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 |
| Tabur | 2 | 38.2 | 32.0 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 |
| Giza | 3 | 38.4 | 32.2 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 |
| Kharga | 4 | 41.0 | 35.5 | 1.8 | 1.8 | 1.8 | 1.8 | 1.8 | 1.8 | 1.8 | 1.8 |
| | 5 | 38.5 | 32.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 |
| | 6 | 35.0 | 28.0 | 1.2 | 1.2 | 1.2 | 1.2 | 1.2 | 1.2 | 1.2 | 1.2 |
| | 7 | 35.0 | 28.0 | 1.2 | 1.2 | 1.2 | 1.2 | 1.2 | 1.2 | 1.2 | 1.2 |
| | 8 | 35.0 | 28.0 | 1.2 | 1.2 | 1.2 | 1.2 | 1.2 | 1.2 | 1.2 | 1.2 |
| | 9 | 35.0 | 28.0 | 1.2 | 1.2 | 1.2 | 1.2 | 1.2 | 1.2 | 1.2 | 1.2 |
| | 10 | 35.0 | 28.0 | 1.2 | 1.2 | 1.2 | 1.2 | 1.2 | 1.2 | 1.2 | 1.2 |
| | 11 | 35.0 | 28.0 | 1.2 | 1.2 | 1.2 | 1.2 | 1.2 | 1.2 | 1.2 | 1.2 |
| | 12 | 35.0 | 28.0 | 1.2 | 1.2 | 1.2 | 1.2 | 1.2 | 1.2 | 1.2 | 1.2 |
| | 13 | 35.0 | 28.0 | 1.2 | 1.2 | 1.2 | 1.2 | 1.2 | 1.2 | 1.2 | 1.2 |
| | 14 | 35.0 | 28.0 | 1.2 | 1.2 | 1.2 | 1.2 | 1.2 | 1.2 | 1.2 | 1.2 |
| | 15 | 35.0 | 28.0 | 1.2 | 1.2 | 1.2 | 1.2 | 1.2 | 1.2 | 1.2 | 1.2 |
| | 16 | 35.0 | 28.0 | 1.2 | 1.2 | 1.2 | 1.2 | 1.2 | 1.2 | 1.2 | 1.2 |
| | 17 | 35.0 | 28.0 | 1.2 | 1.2 | 1.2 | 1.2 | 1.2 | 1.2 | 1.2 | 1.2 |
| | 18 | 35.0 | 28.0 | 1.2 | 1.2 | 1.2 | 1.2 | 1.2 | 1.2 | 1.2 | 1.2 |
| | 19 | 35.0 | 28.0 | 1.2 | 1.2 | 1.2 | 1.2 | 1.2 | 1.2 | 1.2 | 1.2 |
| | 20 | 35.0 | 28.0 | 1.2 | 1.2 | 1.2 | 1.2 | 1.2 | 1.2 | 1.2 | 1.2 |
| | 21 | 35.0 | 28.0 | 1.2 | 1.2 | 1.2 | 1.2 | 1.2 | 1.2 | 1.2 | 1.2 |
| | 22 | 35.0 | 28.0 | 1.2 | 1.2 | 1.2 | 1.2 | 1.2 | 1.2 | 1.2 | 1.2 |
| | 23 | 35.0 | 28.0 | 1.2 | 1.2 | 1.2 | 1.2 | 1.2 | 1.2 | 1.2 | 1.2 |
| | 24 | 35.0 | 28.0 | 1.2 | 1.2 | 1.2 | 1.2 | 1.2 | 1.2 | 1.2 | 1.2 |
| | 25 | 35.0 | 28.0 | 1.2 | 1.2 | 1.2 | 1.2 | 1.2 | 1.2 | 1.2 | 1.2 |
| | 26 | 35.0 | 28.0 | 1.2 | 1.2 | 1.2 | 1.2 | 1.2 | 1.2 | 1.2 | 1.2 |
| | 27 | 35.0 | 28.0 | 1.2 | 1.2 | 1.2 | 1.2 | 1.2 | 1.2 | 1.2 | 1.2 |
| | 28 | 35.0 | 28.0 | 1.2 | 1.2 | 1.2 | 1.2 | 1.2 | 1.2 | 1.2 | 1.2 |
| | 29 | 35.0 | 28.0 | 1.2 | 1.2 | 1.2 | 1.2 | 1.2 | 1.2 | 1.2 | 1.2 |
| | 30 | 35.0 | 28.0 | 1.2 | 1.2 | 1.2 | 1.2 | 1.2 | 1.2 | 1.2 | 1.2 |

* Total for 28 days

**TABLE C 1.—AIR TEMPERATURE AT 2 METRES ABOVE GROUND
FEBRUARY — 1964**

| STATION | Air Temperature (°C) | | | | | Mean Duration in hours of daily air temperature above the following values. | | | | | | | | | | |
|---------------|----------------------|--------------|-----------------------|-----------------------|---------------------|--|------|------|------|------|------|------|------|------|------|------|
| | Mean Max. | Mean Min. | Mean of the day | Night time mean | Day time mean | -5°C | 0°C | 5°C | 10°C | 15°C | 20°C | 25°C | 30°C | 35°C | 40°C | 45°C |
| El Kaer | 18.5 | 5.8 | 13.3 | 11.4 | 15.5 | 24.0 | 24.0 | 24.0 | 18.5 | 6.9 | 0.7 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Tahrir | 20.5 | 7.4 | 13.3 | 11.0 | 15.9 | 24.0 | 24.0 | 23.8 | 17.6 | 8.3 | 1.6 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Giza | 20.6 | 6.5 | 13.4 | 11.2 | 16.0 | 24.0 | 24.0 | 23.7 | 17.8 | 9.2 | 1.9 | 0.2 | 0.0 | 0.0 | 0.0 | 0.0 |
| Kharga | 23.1 | 6.6 | 15.1 | 12.3 | 18.2 | 24.0 | 24.0 | 22.9 | 18.5 | 12.4 | 5.3 | 0.7 | 0.0 | 0.0 | 0.0 | 0.0 |

**TABLE C 2.—ABSOLUTE VALUES OF AIR TEMPERATURE AT 2 METRES ABOVE GROUND,
ABSOLUTE MINIMUM AIR TEMPERATURE AT 5cms ABOVE GROUND OVER
DIFFERENT FIELDS.**

FEBRUARY — 1964

| STATION | Max. Temp. at 2 metres (°C) | | | | Min. Temp. at 2 metres (°C) | | | | Min. Temp. at 5 cms. above (°C) | | | |
|---------------|-----------------------------|------|--------|------|-----------------------------|------|--------|------|---------------------------------|------|-------|------|
| | Highest | | Lowest | | Highest | | Lowest | | Dry soil | | Grass | |
| | Value | Date | Value | Date | Value | Date | Value | Date | Value | Date | Value | Date |
| El Kaer | 24.8 | 26 | 14.8 | 4 | 13.5 | 27 | 5.2 | 11 | — | — | — | — |
| Tahrir | 24.2 | 21 | 14.7 | 4 | 10.1 | 29 | 3.4 | 8 | 0.6 | 8 | — | — |
| Giza | 27.9 | 27 | 17.0 | 4 | 10.0 | 29 | 3.4 | 7.15 | -1.0 | 15 | -2.4 | 15 |
| Kharga | 29.8 | 27 | 18.7 | | 12.7 | 12 | 2.1 | 9 | -1.0 | 9 | — | — |

**TABLE C 3.—(SOLAR+SKY) RADIATION, DURATION OF BRIGHT SUNSHINE, RELATIVE
HUMIDITY, VAPOUR PRESSURE AT 2 METRES ABOVE GROUND, EVAPORATION &
RAINFALL.**

FEBRUARY — 1964

| STATION | (Solar+Sky) Radia- tion gm. cal/cm ² | Duration of Bright Sunshine (hours) | | | Relative Humidity. % | | | | | | Vapour pressure (mms) | | | | | | Evapora- tion(mms) | | Rainfall (mms) | | | |
|---------|--|--|---------------------------|----|----------------------|----------|-------------|-----------|--------|------|-----------------------|------------|---------|-------|--------|------|-----------------------|-------------|---------------------------|-------------------------|--------------|--|
| | | Total Actual monthly | Total Possible monthly | % | Duration in hours | | Mean of day | 1200 U.T. | Lowest | Date | Mean of day | 1200 UT | Highest | Date | Lowest | Date | Piche | Pan class A | Total Amou- nt Monthly | Max. Fall in one day | Date | |
| | | | | | > 90% | > 80% | | | | | | | | | | | | | | | | |
| El Kasr | 319.8 | — | 320.9 | — | — | — | 77 | 56 | 24 | 16 | 8.2 | 8.4 | 14.1 | 15 | 4.6 | 2 | — | 5.30 | 39.1 | 16.3 | 3 | |
| Tahrir | 385.2 | *226.7 | *310.9 | 73 | 2.1 | 7.1 | 65 | 41 | 19 | 16 | 7.1 | 6.6 | 10.4 | 22.27 | 3.1 | 17 | 9.2 | 5.09 | 2.8 | 1.4 | 4 | |
| Giza | 364.1 | 232.2 | 322.4 | 72 | 2.2 | 5.3 | 60 | 39 | 20 | 16 | 6.7 | 6.4 | 10.5 | 21 | 3.7 | 1 | 8.7 | 4.42 | Tr. | Tr. | 3,4,5, 28 | |
| Kharga | 417.9 | 287.2 | 327.9 | 88 | 0 | 0 | 41 | 27 | 15 | 11 | 5.0 | 5.2 | 7.6 | 29 | 2.5 | 11 | 16.4 | 7.47 | 0.0 | — | — | |

* Total for 28 days.

TABLE C. EXTREME SOIL TEMPERATURE AT DIFFERENT DEPTHS
IN DIFFERENT FIELDS

FEBRUARY - 1964

| Field No. | Date | Time | Temperature (°C) | | | | Remarks |
|-----------|--------|-------|------------------|----------|----------|----------|-----------|
| | | | 0-10 cm | 10-20 cm | 20-30 cm | 30-40 cm | |
| 1 | 1/2/64 | 10.00 | 15.0 | 12.0 | 10.0 | 8.0 | Clear sky |
| 2 | 1/2/64 | 12.00 | 18.0 | 14.0 | 11.0 | 9.0 | Clear sky |
| 3 | 1/2/64 | 14.00 | 20.0 | 16.0 | 12.0 | 10.0 | Clear sky |
| 4 | 1/2/64 | 16.00 | 22.0 | 18.0 | 13.0 | 11.0 | Clear sky |
| 5 | 1/2/64 | 18.00 | 24.0 | 20.0 | 14.0 | 12.0 | Clear sky |
| 6 | 1/2/64 | 20.00 | 26.0 | 22.0 | 15.0 | 13.0 | Clear sky |
| 7 | 1/2/64 | 22.00 | 28.0 | 24.0 | 16.0 | 14.0 | Clear sky |
| 8 | 1/2/64 | 24.00 | 30.0 | 26.0 | 17.0 | 15.0 | Clear sky |
| 9 | 1/2/64 | 26.00 | 32.0 | 28.0 | 18.0 | 16.0 | Clear sky |
| 10 | 1/2/64 | 28.00 | 34.0 | 30.0 | 19.0 | 17.0 | Clear sky |

Printed at the General Organisation
for Government Printing Offices, Cairo
Under Secretary of State
ALY SULTAN ALY
Chairman of the Board of Directors

| Field No. | Date | Time | Temperature (°C) | | | | Remarks |
|-----------|--------|-------|------------------|----------|----------|----------|-----------|
| | | | 0-10 cm | 10-20 cm | 20-30 cm | 30-40 cm | |
| 1 | 1/2/64 | 10.00 | 15.0 | 12.0 | 10.0 | 8.0 | Clear sky |
| 2 | 1/2/64 | 12.00 | 18.0 | 14.0 | 11.0 | 9.0 | Clear sky |
| 3 | 1/2/64 | 14.00 | 20.0 | 16.0 | 12.0 | 10.0 | Clear sky |
| 4 | 1/2/64 | 16.00 | 22.0 | 18.0 | 13.0 | 11.0 | Clear sky |
| 5 | 1/2/64 | 18.00 | 24.0 | 20.0 | 14.0 | 12.0 | Clear sky |
| 6 | 1/2/64 | 20.00 | 26.0 | 22.0 | 15.0 | 13.0 | Clear sky |
| 7 | 1/2/64 | 22.00 | 28.0 | 24.0 | 16.0 | 14.0 | Clear sky |
| 8 | 1/2/64 | 24.00 | 30.0 | 26.0 | 17.0 | 15.0 | Clear sky |
| 9 | 1/2/64 | 26.00 | 32.0 | 28.0 | 18.0 | 16.0 | Clear sky |
| 10 | 1/2/64 | 28.00 | 34.0 | 30.0 | 19.0 | 17.0 | Clear sky |

4448-1969-200

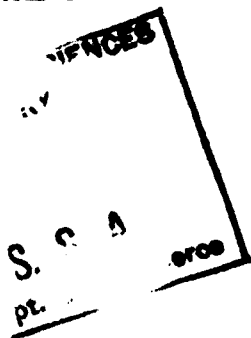


UNITED ARAB REPUBLIC

MONTHLY WEATHER REPORT

VOLUME 7

NUMBER 3



MARCH, 1964

U.D.C. 551. 506.1 (62)

MINISTRY OF SCIENTIFIC RESEARCH—METEOROLOGICAL DEPARTMENT
CAIRO

PUBLICATIONS OF THE METEOROLOGICAL DEPARTMENT OF THE UNITED ARAB REPUBLIC—CAIRO

In fulfilment of its duties as the National Meteorological service for the U.A.R., the Meteorological Department issues several reports and publications on weather climate and agrometeorology. The principal publications are described on this page.

Orders for publications should be addressed to :—

“The Director General, Meteorological Department, Kubri-el-Qubbeh—CAIRO”.

THE DAILY WEATHER REPORT

This report is printed daily in the Meteorological Department. It contains surface and upper air observations carried by the relevant networks of the Republic and made at the four main synoptic hours of observations (00, 06, 12 and 18 U.T.); as well as ship observations over the Eastern Mediterranean and north Red Sea made at the same times.

It also contains two surface synoptic charts at 00 and 12 U.T. and two upper air charts for the standard isobaric surfaces 700 & 500 mbs. at both 00 and 12 U.T.

In compliance with resolution 8 (EC-XIII) of WMO, foreign upper air data included in Cairo Subregional Broadcast are also given in this report.

THE MONTHLY WEATHER REPORT

First issued in 1909, the Monthly Weather Report served to give a brief summary of the weather conditions that prevailed over Egypt during the month, with a table showing the mean values for few meteorological elements and their deviations from the normal values. From 1954 to 1957 this report was in a rapid state of development and extension resulting into a voluminous report on January 1958 giving surface, upper air, and agro-meteorological data for U.A.R.

THE AGRO-METEOROLOGICAL ABRIDGED MONTHLY REPORT

Gives a review of weather experienced in the agro-meteorological stations of the U.A.R. as well as monthly values of certain elements.

THE ANNUAL REPORT

This report gives annual values and statistics for the various meteorological elements, together with a summary of the weather conditions that prevailed during all months of the year .

CLIMATOLOGICAL NORMALS FOR EGYPT

The normals, long averages and statistical data are given in one edition for stations in Egypt from the date of opening of each station up to 1945. A new voluminous edition was issued in March 1968 which brings normals and mean values up till 1960.



UNITED ARAB REPUBLIC

MONTHLY WEATHER REPORT

VOLUME 7

NUMBER 3

MARCH, 1964

U.D.C. 551. 506.1 (62)

**MINISTRY OF SCIENTIFIC RESEARCH—METEOROLOGICAL DEPARTMENT
CAIRO**

*Printed at the General Organisation
for Government Printing Offices, Cairo
Under-Secretary of State*

ALY SULTAN ALY
Chairman of the Board of Directors

4449-1968-150

CONTENTS

| | PAGE |
|--|------|
| Genral Summary of Weather Conditions | 1-2 |

SURFACE DATA

| | |
|--|-----|
| Table A1.—Monthly values of the Atmospheric Pressure, Air Temperature, Relative Humidity, Bright Sunshine Duration and Piche Evaporation | 3 |
| „ A2.—Maximum and Minimum Air Temperatures | 4 |
| „ A3.—Sky Cover and Rainfall | 5 |
| „ A4.—Number of Days of Occurrence of Miscellaneous Weather Phenomena | 6 |
| „ A5.—Number in Hours of Occurrences of Concurrent Surface Wind Speed and Direction Recorded Within Specified Ranges | 7,8 |

UPPER AIR DATA

| | |
|---|-------|
| Table B1.—Monthly Means and Monthly Absolute Higher & Lower Values of Altitude, air Temperature & Dew point at Standard and Selected Pressure Surface | 9,10 |
| „ B2.—Mean and Extreme values of The Freezing Level and The Tropopause; The Highest Wind Speed in The Upper Air | 11 |
| „ B3.—Number of Occurreneces of Wind Direction Within Specified Ranges and The Mean Sealar Wind Speed at the Standard and Selected Pressure Surfaces | 12-14 |

AGRO-METNOROLOGICAL DATA

| | |
|--|-------|
| Review of Agro-Meteorological stations | 15-18 |
|--|-------|

| | |
|--|------|
| Table C1.—Air Temperature at 2 Metres Above Ground | 19 . |
| „ C2.—Absolute Values of Air Temperature at 2 Metres Above Ground, Absolute Minimum Air Temperature at 5 Cms. Above Ground Over Different Field . | 19 |
| „ C3.—(Solar + Sky) Radiation, Duration of Bright Sunshine, Relative Humidity and Vapour Pressure at 2 Metres Above Ground, Evaporation and Rainfall | 19 |
| „ C4.—Extreme Soil Temperature at Different Depths in Different Fields | 20 |
| „ C5.—Surface wind | 20 |

GENERAL SUMMARY OF WEATHER CONDITIONS

MARCH 1964

Changeable and rather warm, intervened with seven khamsin waves. Dusty in general the 1st & 4th weeks, foggy in the early morning over Lower Egypt and light rainy over the Mediterranean district.

GENERAL DESCRIPTION OF WEATHER

The prevailing weather this month was changeable, rather warm and seven variant khamsin waves of short durations have been experienced during which air temperature departures above normal values ranged between 3°C and 10°C. The prevailing warm spells were separated by rather cold spells during which air temperature departures below normal values ranged between 2°C & 8°C.

Sandy weather accompanied transits of travelling cold fronts in general particularly during the 1st & 4th weeks.

Rain was light in general and confined to Mediterranean, Lower Egypt & Cairo area districts, but it was locally heavy on the 17th & 18th. For the month as a whole the monthly rainfall was subnormal.

It is worth to mention that early morning mist or fog developed over scattered localities in Delta, Canal and Cairo area more than 10 days during this month.

PRESSURE DISTRIBUTION

The characteristic pressure systems of the surface map this month can be summarized in :

- The amalgamated high pressure over Urasia north of latitude 45°N.
- The subtropical high pressure belt extension over North Africa.

— The transitory Mediterranean low pressure systems that develop over West Mediterranean with well marked secondaries over North Africa their preferred track.

— The northward elongation of the Sudan trough towards East Mediterranean.

On the other hand the upper pressure patterns at 700 & 500 mb levels were confined to the deep polar low pressure system over North Russia with its extended south and southwest upper troughs towards the Black Sea or Balkans, together with the high pressure belt south of latitude 35°N.

Seven transitory and rather deep secondary depressions traversed East Mediterranean this month, the first of which started its motion from Central Mediterranean by the end of last February, overrun Asia Minor on the 1st of March, passed by Iraq on the 2nd and proceeded rapidly eastwards on the 3rd.

The rest six secondary depressions started as minor secondaries over North Africa at the foot of the rather deep and active low pressure systems of West Mediterranean round the 3rd, 8th, 12th, 16th, 20th & 27th respectively. They traversed the Mediterranean rather rapidly from the west to the east following North Africa their preferred coastal track with the exception of the sixth secondary depression which changed its course from Cyrenica north - eastwards. Transits of these secondary depressions through East Mediterranean were round

the 5th, 11th, 14th, 18th, 25th & 29th respectively. The last three transits were associated with a pronounced northward elongation of the Sudan trough of low pressure which extended as far as Cyprus or Asia Minor.

Due to above abnormal large number of transitory secondary depressions through East Mediterranean this month, the pressure field over the U.A.R. was oscillatory and mostly subnormal, if we exclude the short consecutive intervals during which a local anticyclone established over Western Desert.

It is worth to mention that an amalgamated well established anticyclone extended from Russia westwards over Europe north latitude 45°N between the 1st & 8th, while the subtropical high pressure belt extended from Spain southeastwards over North Africa most of the period between the 13th and 24th.

In the upper troposphere, the subtropical jet stream was evident most of the month over the U.A.R. at above 210 mb level, while the polar jet stream appeared only in association with the travelling depressions north of latitude 30°N at about 310 mb level.

The highest wind speeds recorded at Mersa Matruh, Helwan and Aswan were 150, 136 & 145 knots on the 28th, 26th 24th respectively.

SURFACE WIND

During this month, moderate/fresh winds blew in general but fresh/strong winds blew in the rear of the travelling cold fronts. The prevailing winds were generally northwesterly but they changed to E/SE, then to

SWly & Sly far in advance and in advance of travelling secondary depressions.

Gales were reported at Balteam on the 25th; Tahrir on the 17th; Abu Sueir on the 5th & 18th; Zaher & Kabrit on the 5th and at Hurghada on the 11th & 18th.

TEMPERATURE

Maximum temperature was changeable and of large variability. Seven warm spells of rather short durations were enjoyed and were separated by rather cold spells.

The absolute maximum temperature for the Republic was 38.3°C and was reported at both Kom Ombo & Quseir on the 11th.

Minimum temperature was similarly changeable, but of rather moderate variability.

The absolute minimum temperature for the Republic was 2.8°C reported at Dakhla on the 27th.

PRECIPITATION

During this month rain was light and confined to the northern parts during the 2nd ten days of the month. It extended southwards inland on the 18th as far as Cairo area. The monthly rainfall was generally subnormal apart from very few localities in the Mediterranean & Lower Egypt districts where it exceeded slightly its normal.

The absolute daily rainfall was 14.0 mms reported at El Kasr on the 17th. The absolute monthly rainfall for the Republic was 19.3 mms reported at Borollos L.H. (Mediterranean district).

Cairo 4 / 4 / 1970

M. F. TAHA
Under Secretary of State
Director General
Meteorological Department

**Table A 1.—MONTHLY VALUES OF THE ATMOSPHERIC PRESSURE, AIR TEMPERATURE,
RELATIVE HUMIDITY, BRIGHT SUNSHINE DURATION & PICHE EVAPORATION**

MARCH — 1964

| STATION | Atmospheric Pressure (mbs) M.S.L | | Air Temperature °C | | | | | | | | | Relative Humidity % | | Bright Sunshine Duration (Hours) | | | Piche Evaporation mma. Mean |
|-----------------------|-------------------------------------|------------------------|--------------------|------------------------|----------|------------------------|------------|----------|------------------------|----------|------------------------|---------------------|------------------------|----------------------------------|----------------|------|--------------------------------|
| | | | Maximum | | Minimum | | A + B 2 | Dry Bulb | | Wet Bulb | | | | | | | |
| | Mean | D.F. Normal or Average | (A) Mean | D.F. Normal or Average | (B) Mean | D.F. Normal or Average | | Mean | D.F. Normal or Average | Mean | D.F. Normal or Average | Mean | D.F. Normal or Average | Total Actual | Total Possible | % | |
| Sallum | 1013.4 | —1.3 | 22.9 | +1.3 | 12.5 | +0.9 | 17.7 | 17.0 | +0.8 | 13.2 | +1.6 | 63 | + 9 | — | — | — | 7.8 |
| Mersa Matruh (A) | 1014.2 | —1.3 | 21.7 | +1.4 | 11.2 | +1.5 | 16.4 | 15.6 | +0.7 | 12.6 | —1.2 | 68 | + 5 | 241.8 | 371.6 | 65.1 | 10.1 |
| Alexandria . . (A) | 1013.8 | —1.8 | 22.1 | +1.1 | 11.8 | +0.6 | 17.0 | 16.5 | +0.9 | 13.6 | +1.4 | 70 | + 3 | 270.2 | 371.6 | 72.7 | 4.7 |
| Port Said . . (A) | 1013.7 | —1.5 | 21.1 | —0.9 | 13.9 | +0.4 | 17.5 | 16.4 | 0.0 | 14.0 | +0.7 | 75 | — 6 | 253.2 | 371.6 | 68.1 | 5.6 |
| El Arish | 1013.9 | —1.5 | 22.0 | +0.8 | 11.9 | +1.2 | 17.0 | 16.8 | +0.9 | 14.0 | +1.4 | 72 | + 6 | 271.0 | 373.0 | 72.7 | 4.5 |
| Ghazza | 1013.5 | —1.3 | 20.1 | +0.1 | 12.6 | +1.0 | 16.4 | 16.4 | +0.5 | 14.3 | +0.9 | 78 | + 4 | 221.4 | 371.8 | 59.5 | 3.7 |
| Tanta | 1013.5 | — | 24.4 | — | 9.8 | — | 17.1 | 16.3 | — | 12.9 | — | 65 | — | 283.1 | 371.8 | 76.1 | 3.9 |
| Cairo (A) | 1013.7 | —1.5 | 25.4 | +1.7 | 12.4 | +1.1 | 18.9 | 18.2 | +0.9 | 12.6 | +0.3 | 48 | — 4 | — | — | — | 12.7 |
| Fayoum | 1013.7 | — | 26.2 | — | 11.2 | — | 18.7 | 18.4 | — | 13.0 | — | 50 | — | — | — | — | 6.3 |
| Minya (A) | 1014.1 | —1.4 | 27.0 | +1.4 | 8.3 | +0.5 | 17.6 | 17.3 | +0.7 | 12.4 | +1.5 | 53 | + 6 | — | — | — | 6.8 |
| Assyout (A) | 1013.6 | —1.1 | 28.1 | +1.7 | 11.7 | +1.2 | 19.9 | 19.8 | +1.3 | 11.8 | +0.9 | 32 | 0 | — | — | — | 13.4 |
| Luxor (A) | 1012.6 | —0.7 | 30.2 | +1.2 | 11.1 | +0.4 | 20.6 | 21.0 | +1.0 | 12.8 | +0.6 | 33 | — 1 | — | — | — | 8.4 |
| Aswan (A) | 1012.7 | —0.2 | 31.3 | +0.6 | 13.5 | —0.7 | 22.4 | 22.5 | +0.5 | 11.2 | +0.3 | 15 | 0 | — | — | — | 18.7 |
| Siwa | 1013.9 | —1.6 | 26.8 | +1.8 | 10.1 | +1.9 | 18.4 | 18.4 | +1.4 | 11.5 | +1.1 | 38 | 0 | — | — | — | 11.3 |
| Behariya | 1014.1 | —1.2 | 27.3 | +1.0 | 9.8 | +1.1 | 18.6 | 18.8 | +0.9 | 11.3 | +0.8 | 33 | — 1 | — | — | — | 7.6 |
| Farafra | 1015.5 | — | 28.3 | — | 9.9 | — | 19.1 | 19.1 | — | 11.1 | — | 31 | — | — | — | — | 12.8 |
| Dakhla | 1012.7 | —0.7 | 30.0 | +2.4 | 7.3 | —2.2 | 18.6 | 18.4 | —0.2 | 10.4 | +0.8 | 30 | + 6 | — | — | — | 10.9 |
| Kharga | 1014.3 | — | 30.2 | — | 11.0 | — | 20.6 | 20.9 | — | 10.7 | — | 21 | — | 328.2 | 372.4 | 88.1 | 18.6 |
| Tor | 1012.7 | —1.0 | 25.3 | +1.3 | 13.3 | +0.6 | 19.3 | 19.8 | +0.9 | 14.1 | +0.7 | 50 | 0 | — | — | — | 6.9 |
| Hurghada | 1012.5 | +0.7 | 25.5 | +2.5 | 12.7 | +0.4 | 19.1 | 19.1 | +0.5 | 13.9 | +0.5 | 51 | — 1 | — | — | — | 14.5 |
| Quesir | 1012.6 | —1.0 | 25.5 | +0.8 | 16.5 | 0.0 | 20.8 | 21.2 | +0.6 | 14.8 | +0.6 | 46 | 0 | — | — | — | 14.0 |

Table A 2. MAXIMUM AND MINIMUM AIR TEMPERATURES

MARCH — 1964

| Station | Maximum Temperature °C | | | | | | | | | Grass Min. Temp. | | Minimum Temperature °C | | | | | | | |
|--------------------------|------------------------|------|--------|-------|----------------------------|-----|-----|-----|-----|------------------|------------------|------------------------|-------|--------|------|-----------------------------|----|----|-----|
| | Highest | Date | Lowest | Date | No. of Days with Max-Temp. | | | | | Mean | Dev. From Normal | Highest | Date | Lowest | Date | No. of Days with Min. Temp. | | | |
| | | | | | >25 | >30 | >35 | >40 | >45 | | | | | | | <10 | <5 | <0 | <-5 |
| Sallum | 33.9 | 9 | 18.5 | 27 | 9 | 1 | 0 | 0 | 0 | 12.2 | — | 17.5 | 9 | 9.6 | 2 | 2 | 0 | 0 | 0 |
| Mersa Matruh (A) | 29.8 | 1,9 | 18.2 | 18 | 4 | 0 | 0 | 0 | 0 | — | — | 15.0 | 29 | 6.7 | 27 | 7 | 0 | 0 | 0 |
| Alexandria (A) | 28.3 | 1 | 17.6 | 11 | 3 | 0 | 0 | 0 | 0 | — | — | 15.8 | 10 | 7.0 | 1,4 | 8 | 0 | 0 | 0 |
| Port Said (A) | 26.0 | 14 | 18.3 | 4,11 | 3 | 0 | 0 | 0 | 0 | 13.2 | — | 16.9 | 29 | 11.4 | 12 | 0 | 0 | 0 | 0 |
| El Arish | 31.2 | 5 | 19.2 | 12 | 4 | 1 | 0 | 0 | 0 | 10.4 | — | 14.8 | 18 | 7.8 | 9 | 4 | 0 | 0 | 0 |
| Ghazza | 28.5 | 29 | 16.8 | 12 | 4 | 0 | 0 | 0 | 0 | 12.0 | — | 16.0 | 27 | 9.2 | 4 | 3 | 0 | 0 | 0 |
| Tanta | 29.2 | 9 | 20.3 | 11 | 11 | 0 | 0 | 0 | 0 | — | — | 14.6 | 10 | 6.2 | 1 | 14 | 0 | 0 | 0 |
| Cairo (A) | 30.5 | 10 | 18.9 | 18 | 14 | 2 | 0 | 0 | 0 | — | — | 17.0 | 10 | 9.2 | 9 | 1 | 0 | 0 | 0 |
| Fayoum | 31.8 | 28 | 21.7 | 18 | 15 | 6 | 0 | 0 | 0 | 7.7 | — | 14.9 | 29 | 8.8 | 1 | 6 | 0 | 0 | 0 |
| Minya (A) | 32.0 | 29 | 22.9 | 18 | 20 | 6 | 0 | 0 | 0 | 5.5 | — | 13.0 | 29,30 | 4.1 | 4 | 24 | 3 | 0 | 0 |
| Assyout (A) | 33.7 | 24 | 22.6 | 12,18 | 24 | 9 | 0 | 0 | 0 | 10.3 | — | 18.4 | 29 | 8.9 | 5 | 4 | 0 | 0 | 0 |
| Luxor (A) | 36.0 | 30 | 24.0 | 12,18 | 29 | 15 | 1 | 0 | 0 | — | — | 16.2 | 25 | 8.2 | 5 | 12 | 0 | 0 | 0 |
| Aswan (A) | 36.7 | 28 | 27.3 | 18 | 31 | 19 | 5 | 0 | 0 | — | — | 17.1 | 30 | 10.6 | 4 | 0 | 0 | 0 | 0 |
| Siwa | 36.6 | 10 | 22.0 | 2 | 17 | 8 | 1 | 0 | 0 | 8.4 | — | 15.1 | 31 | 5.4 | 3 | 18 | 0 | 0 | 0 |
| Bahariya | 35.1 | 10 | 21.8 | 18 | 21 | 8 | 1 | 0 | 0 | 8.8 | — | 15.7 | 29 | 5.6 | 3 | 18 | 0 | 0 | 0 |
| Farafra | 34.8 | 29 | 22.5 | 18 | 24 | 10 | 0 | 0 | 0 | 8.8 | — | 15.5 | 30 | 5.1 | 13 | 19 | 0 | 0 | 0 |
| Dakhla | 35.4 | 17 | 23.6 | 12 | 29 | 16 | 3 | 0 | 0 | 2.0 | — | 13.7 | 31 | 2.8 | 27 | 23 | 5 | 0 | 0 |
| Kharga | 35.0 | 31 | 25.2 | 12 | 31 | 14 | 0 | 0 | 0 | 8.4 | — | 18.2 | 31 | 6.0 | 5 | 11 | 0 | 0 | 0 |
| Tor | 30.8 | 31 | 22.2 | 7 | 15 | 1 | 0 | 0 | 0 | — | — | 18.0 | 11 | 9.0 | 4 | 1 | 0 | 0 | 0 |
| Hurghada | 34.3 | 11 | 22.0 | 12 | 14 | 2 | 0 | 0 | 0 | — | — | 15.9 | 25 | 8.8 | 5 | 3 | 0 | 0 | 0 |
| Quseir | 38.3 | 11 | 22.3 | 4 | 12 | 1 | 1 | 0 | 0 | — | — | 18.4 | 10 | 12.7 | 5 | 0 | 0 | 0 | 0 |

Table A 3.—SKY COVER AND RAINFALL

MARCH — 1964

| Station | Mean Sky Cover Oct | | | | | Rainfall mms | | | | | | | | | | |
|----------------------------|--------------------|------|------|------|-------|-----------------|---------------------|-------------------------|------|------------------------------------|-------|-------|-------|------|------|------|
| | 00 | 06 | 12 | 18 | Daily | Total Amount | Dev. From Normal | Max. Fall in one day | | Number of Days With Amount of Rain | | | | | | |
| | U.T. | U.T. | U.T. | U.T. | Mean | | | Amount | Date | < 0.1 | ≥ 0.1 | ≥ 1.0 | ≥ 5.0 | ≥ 10 | ≥ 25 | ≥ 50 |
| | | | | | | | | | | | | | | | | |
| Sallum | 2.5 | 3.5 | 4.7 | 2.4 | 3.2 | 3.7 | — 9.9 | 3.7 | 17 | 0 | 1 | 1 | 0 | 0 | 0 | 0 |
| Mersa Matruh (A) | 2.5 | 3.9 | 4.4 | 2.7 | 3.2 | 12.1 | — 1.6 | 12.0 | 17 | 1 | 2 | 1 | 1 | 1 | 0 | 0 |
| Alexandria (A) | 2.6 | 4.8 | 4.5 | 3.1 | 3.7 | 7.3 | — 6.7 | 5.8 | 17 | 1 | 4 | 2 | 1 | 0 | 0 | 0 |
| Port Said (A) | 0.9 | 2.7 | 3.4 | 0.2 | 2.2 | 0.4 | — 8.2 | 0.2 | 15 | 0 | 3 | 0 | 0 | 0 | 0 | 0 |
| El Arish | 3.8 | 4.2 | 3.7 | 3.3 | 3.7 | 1.0 | — 11.9 | 1.0 | 11 | 2 | 1 | 1 | 0 | 0 | 0 | 0 |
| Ghazza | 4.4 | 4.9 | 4.2 | 3.2 | 4.0 | 20.7 | — 7.7 | 6.8 | 25 | 1 | 8 | 5 | 1 | 0 | 0 | 0 |
| Tanta | — | 1.9 | 3.3 | 0.7 | — | 4.9 | + 0.7 | 4.0 | 18 | 0 | 3 | 1 | 0 | 0 | 0 | 0 |
| Cairo (A) | 1.2 | 3.2 | 3.9 | 1.8 | 2.6 | 1.1 | — 1.2 | 1.1 | 18 | 2 | 1 | 1 | 0 | 0 | 0 | 0 |
| Fayoum | — | 1.5 | 2.3 | 0.9 | — | tr. | — 1.7 | tr. | 14 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| Minya (A) | 0.4 | 1.6 | 1.7 | 1.0 | 1.2 | 0.0 | — 0.4 | 0.0 | — | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Assyout (A) | 0.4 | 1.1 | 0.8 | 0.9 | 0.8 | 0.0 | — tr. | 0.0 | — | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Luxor (A) | 0.3 | 0.8 | 1.3 | 1.0 | 1.3 | 0.0 | 0.0 | 0.0 | — | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Aswan (A) | 0.3 | 0.8 | 1.4 | 0.8 | 0.8 | 0.0 | — 0.1 | 0.0 | — | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Siwa | 1.5 | 2.7 | 2.7 | 1.5 | 2.0 | 0.0 | — 0.3 | 0.0 | — | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Bahariya | 0.8 | 1.0 | 2.0 | 0.8 | 1.3 | tr. | + tr. | tr. | 17 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| Farafra | 0.8 | 1.2 | 1.3 | 1.3 | 0.8 | 0.0 | — 0.2 | 0.0 | — | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Dakbla | 0.5 | 1.1 | 1.2 | 0.8 | 0.9 | 0.0 | — tr. | 0.0 | — | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Kharga | — | 1.1 | 1.4 | 1.2 | — | 0.0 | — tr. | 0.0 | — | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Tor. | 0.5 | 1.4 | 1.4 | 0.7 | 1.1 | 0.0 | — 1.3 | 0.0 | — | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Hurghada | 0.6 | 0.9 | 1.0 | 0.7 | 0.9 | 0.0 | — 0.5 | 0.0 | — | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Quseir | 0.5 | 1.4 | 1.4 | 1.1 | 1.1 | 0.0 | — 0.3 | 0.0 | — | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

Table A 4. DAYS OF OCCURRENCE OF MISCELLANEOUS WEATHER PHENOMENA.

MARCH — 1964

| Station | Precipitation | | | | Frost | Thunderstorm | Mist Vis \geq 1000 metres | Fog Vis $<$ 1000 Metres | Haze Vis \geq 1000 Metres | Thick Haze Vis $<$ 1000 Metres | Dust or Sandrising Vis \geq 1000 Metres | Dust or Sandstorm Vis $<$ 1000 Metres | Gale | Clear Sky | Cloudy Sky |
|----------------------------|---------------|------|--------------|------|-------|--------------|-----------------------------|-------------------------|-----------------------------|--------------------------------|---|---------------------------------------|------|-----------|------------|
| | Rain | Snow | Ice, Pellets | Hail | | | | | | | | | | | |
| Sallum | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 6 | 1 | 0 | 7 | 2 |
| Mersa Matruh (A) | 2 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 7 | 3 | 0 | 8 | 0 |
| Alexandria (A) | 4 | 0 | 0 | 0 | 0 | 0 | 2 | 6 | 0 | 0 | 2 | 1 | 0 | 4 | 2 |
| Port Said (A) | 3 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 4 | 0 | 0 | 13 | 0 |
| El Arish | 1 | 0 | 0 | 0 | 0 | 0 | 7 | 0 | 3 | 0 | 9 | 0 | 0 | 4 | 2 |
| Ghazsa | 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 4 | 0 | 0 | 5 | 4 |
| Tanta | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | — | — |
| Cairo (A) | 1 | 0 | 0 | 0 | 0 | 0 | 11 | 1 | 13 | 0 | 11 | 1 | 0 | 13 | 0 |
| Fayoum | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | — | — |
| Minya (A) | 0 | 0 | 0 | 0 | 0 | 0 | 8 | 0 | 2 | 0 | 3 | 0 | 0 | 25 | 0 |
| Assyout (A) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 8 | 0 | 3 | 1 | 0 | 26 | 0 |
| Luxor (A) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 12 | 0 | 2 | 0 | 0 | 26 | 0 |
| Aswan (A) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 4 | 0 | 0 | 25 | 1 |
| Siwa | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5 | 0 | 0 | 17 | 1 |
| Bahariya | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 24 | 0 |
| Farafra | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 5 | 0 | 4 | 1 | 0 | 22 | 0 |
| Dakhla | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 0 | 3 | 1 | 0 | 25 | 0 |
| Kharga | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 8 | 0 | 0 | — | — |
| Tor | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 5 | 0 | 0 | 35 | 0 |
| Hurghada | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 7 | 1 | 2 | 26 | 0 |
| Quesir | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 8 | 0 | 0 | 26 | 0 |

**Table A 5.—NUMBER IN HOURS OF OCCURRENCES OF CONCURRENT SURFACE
WIND SPEED AND DIRECTION RECORDED WITHIN SPECIFIED RANGES**

MARCH — 1964

| Station | calm (hours) | Variable (hours) | Unrecorded (hours) | Wind speed in knots | Number in hours of occurrences of wind blowing from the ranges of directions indicated | | | | | | | | | | | | | |
|----------------|--------------|------------------|--------------------|------------------------|---|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|----------------|--|
| | | | | | 345 / 014 | 015 / 014 | 045 / 074 | 075 / 104 | 105 / 134 | 135 / 164 | 165 / 194 | 195 / 224 | 225 / 254 | 255 / 284 | 285 / 314 | 315 / 344 | All directions | |
| | | | | | | | | | | | | | | | | | | |
| Matruh (A) | 16 | 0 | 2 | 1—10 | 55 | 14 | 19 | 24 | 46 | 37 | 21 | 30 | 10 | 51 | 21 | 26 | 354 | |
| | | | | 11—27 | 11 | 5 | 7 | 22 | 34 | 13 | 15 | 28 | 17 | 40 | 58 | 103 | 353 | |
| | | | | 28—47 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 2 | 11 | 2 | 19 | |
| | | | | ≥48 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| | | | | All speeds | 66 | 19 | 26 | 46 | 80 | 50 | 36 | 60 | 29 | 93 | 90 | 131 | 726 | |
| Alexandria (A) | 8 | 0 | 0 | 1—10 | 48 | 40 | 52 | 38 | 64 | 30 | 23 | 18 | 5 | 29 | 87 | 51 | 485 | |
| | | | | 11—27 | 7 | 11 | 5 | 5 | 8 | 2 | 1 | 7 | 19 | 72 | 103 | 11 | 251 | |
| | | | | 28—47 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| | | | | ≥48 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| | | | | All speeds | 55 | 51 | 57 | 43 | 72 | 32 | 24 | 25 | 24 | 101 | 190 | 62 | 736 | |
| Said (A) | 0 | 3 | 0 | 1—10 | 53 | 38 | 36 | 37 | 5 | 8 | 6 | 10 | 11 | 19 | 11 | 18 | 252 | |
| | | | | 11—27 | 31 | 28 | 57 | 47 | 12 | 4 | 15 | 11 | 12 | 129 | 63 | 57 | 466 | |
| | | | | 28—47 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 10 | 9 | 2 | 1 | 23 | |
| | | | | ≥48 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| | | | | All speeds | 84 | 66 | 93 | 84 | 17 | 12 | 21 | 22 | 33 | 157 | 76 | 76 | 741 | |
| Arish | 4 | 14 | 0 | 1—10 | 44 | 67 | 37 | 25 | 34 | 99 | 37 | 29 | 82 | 23 | 55 | 29 | 561 | |
| | | | | 11—27 | 2 | 4 | 0 | 0 | 0 | 0 | 5 | 1 | 53 | 42 | 56 | 2 | 165 | |
| | | | | 28—47 | — | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| | | | | ≥48 | — | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| | | | | All speeds | 46 | 71 | 37 | 25 | 34 | 99 | 42 | 30 | 135 | 65 | 111 | 31 | 726 | |
| Izba | 0 | 47 | 0 | 1—10 | 19 | 29 | 37 | 29 | 44 | 95 | 26 | 17 | 19 | 27 | 37 | 39 | 418 | |
| | | | | 11—27 | 19 | 17 | 0 | 0 | 1 | 23 | 6 | 34 | 92 | 70 | 11 | 5 | 278 | |
| | | | | 28—47 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 9 | 0 | 1 | |
| | | | | ≥48 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| | | | | All speeds | 38 | 46 | 37 | 29 | 45 | 118 | 32 | 51 | 112 | 97 | 49 | 44 | 697 | |
| Ta | 65 | 4 | 0 | 1—10 | 27 | 65 | 73 | 55 | 33 | 7 | 27 | 37 | 105 | 77 | 74 | 37 | 617 | |
| | | | | 11—27 | 1 | 0 | 2 | 5 | 0 | 0 | 0 | 3 | 18 | 16 | 12 | 1 | 58 | |
| | | | | 28—47 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| | | | | ≥48 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| | | | | All speeds | 28 | 65 | 7 | 60 | 33 | 7 | 27 | 40 | 123 | 93 | 86 | 38 | 675 | |
| o (A) | 18 | 0 | 92 | 1—10 | 24 | 34 | 51 | 37 | 8 | 7 | 9 | 21 | 34 | 38 | 28 | 39 | 330 | |
| | | | | 11—27 | 5 | 23 | 44 | 33 | 6 | 7 | 20 | 27 | 30 | 41 | 55 | 13 | 304 | |
| | | | | 28—47 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| | | | | ≥48 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| | | | | All speeds | 29 | 57 | 95 | 70 | 14 | 14 | 29 | 48 | 64 | 79 | 83 | 52 | 634 | |

Table A 5. (contd.)—NUMBER IN HOURS OF OCCURRENCES OF CONCURRENT SURFACE WIND SPEED AND DIRECTION RECORDED WITHIN SPECIFIED RANGES

MARCH — 1964

| Station | calm (hours) | Variable (hours) | Unrecorded (hours) | Wind speed in knots | Number in hours of occurrences of wind blowing from the ranges of directions indicated | | | | | | | | | | | | |
|---------------------|--------------|------------------|--------------------|--|--|----------------------------|-------------------------|-------------------------|--------------------------|--------------------------|-------------------------|-------------------------|--------------------------|---------------------------|----------------------------|-----------------------------|------------------------------|
| | | | | | 345 014 | 015 044 | 045 074 | 075 104 | 105 134 | 135 164 | 165 194 | 195 224 | 225 254 | 255 284 | 285 314 | 315 344 | All directions |
| | | | | | | | | | | | | | | | | | |
| Fayoum | 69 | 0 | 0 | 1—10 11—27 28—47 ≥ 48 All speeds | 198 0 0 0 198 | 68 0 0 0 68 | 18 0 0 0 18 | 10 0 0 0 10 | 3 0 0 0 3 | 31 0 0 0 31 | 66 2 0 0 68 | 32 3 0 0 35 | 49 15 0 0 64 | 59 0 0 0 59 | 54 3 0 0 57 | 60 4 0 0 64 | 648 27 0 0 575 |
| Minya (A) | 65 | 3 | 0 | 1—10 11—27 28—47 ≥ 48 All speeds | 133 20 0 0 153 | 64 13 0 0 77 | 8 0 0 0 8 | 3 0 0 0 3 | 23 0 0 0 23 | 72 0 0 0 72 | 26 9 0 0 35 | 8 2 0 0 10 | 3 8 0 0 11 | 38 16 0 0 54 | 52 20 0 0 72 | 132 26 0 0 158 | 562 114 0 0 676 |
| Luxor (A) | 16 | 2 | 0 | 1—10 11—27 28—47 ≥ 48 All speeds | 42 2 0 0 44 | 65 3 0 0 68 | 45 2 0 0 47 | 36 0 0 0 36 | 28 0 0 0 28 | 35 0 0 0 35 | 81 1 0 0 82 | 40 0 0 0 40 | 38 2 0 0 40 | 36 1 0 0 37 | 57 13 0 0 70 | 158 41 0 0 199 | 661 65 0 0 726 |
| Aswan (A) | 9 | 0 | 23 | 1—10 11—27 28—47 ≥ 48 All speeds | 257 82 0 0 339 | 133 21 0 0 154 | 5 0 0 0 5 | 1 0 0 0 1 | 0 0 0 0 0 | 8 0 0 0 8 | 18 0 0 0 18 | 4 0 0 0 4 | 5 2 0 0 7 | 30 5 0 0 35 | 21 9 0 0 30 | 80 31 0 0 111 | 562 150 0 0 712 |
| Siwa. | 50 | 0 | 2 | 1—10 11—27 28—47 ≥ 48 All speeds | 15 17 0 0 32 | 13 8 0 0 21 | 30 2 0 0 32 | 69 4 0 0 73 | 77 19 0 0 96 | 54 15 0 0 69 | 32 9 0 0 41 | 20 8 0 0 28 | 27 5 0 0 32 | 57 20 0 0 77 | 58 75 0 0 133 | 36 22 0 0 58 | 488 204 0 0 692 |
| Dakhla | 48 | 2 | 0 | 1—10 11—27 28—47 ≥ 48 All speeds | 34 1 0 0 35 | 85 0 0 0 85 | 30 0 0 0 30 | 43 0 0 0 43 | 47 0 0 0 47 | 33 0 0 0 33 | 31 2 0 0 33 | 43 0 0 0 43 | 37 1 0 0 38 | 53 0 0 0 53 | 119 7 0 0 126 | 118 10 0 0 128 | 673 21 0 0 694 |
| Hurghada | 5 | 15 | 0 | 1—10 11—27 28—47 ≥ 48 All speeds | 14 44 0 0 58 | 30 2 0 0 32 | 26 0 0 0 26 | 10 0 0 0 10 | 39 7 0 0 46 | 20 15 0 0 35 | 13 1 0 0 14 | 7 0 0 0 7 | 11 1 0 0 12 | 70 49 0 0 119 | 90 122 1 0 213 | 15 124 13 0 152 | 345 365 14 0 724 |
| Quseir | 24 | 0 | 4 | 1—10 11—27 28—47 ≥ 48 All speeds | 41 64 0 0 105 | 41 4 0 0 45 | 15 0 0 0 15 | 19 0 0 0 19 | 24 3 0 0 27 | 40 0 0 0 40 | 23 0 0 0 23 | 16 1 0 0 17 | 40 2 0 0 42 | 98 13 0 0 111 | 94 39 0 0 133 | 67 72 0 0 139 | 518 198 0 0 716 |

Table B 1.—UPPER AIR CLIMATOLOGICAL DATA

MARCH—1964

| Station | Pressure Surface (Millibar) | Altitude of Pressure Surface (gpm) | | | | Temperature (°C) | | | | Dew Point (°C) | |
|----------------------|--------------------------------|------------------------------------|---------------|---------------|---------------|------------------|-------|---------|--------|----------------|-------|
| | | N | Mean | Highest | Lowest | N | Mean | Highest | Lowest | N | Mean |
| Mersa Matruh 0000 UT | Surface . . . | 30 | * 1011m.b. | * 1017m.b. | * 1002m.b. | 30 | 14.0 | 17.4 | 10.2 | 30 | 10.4 |
| | 1000 . . . | 30 | 135 | 188 | 62 | 30 | 14.3 | 18.0 | 11.1 | 30 | 10.1 |
| | 850 . . . | 30 | 1498 | 1550 | 1407 | 30 | 9.4 | 17.5 | 3.8 | 26 | -1.4 |
| | 700 . . . | 30 | 3086 | 3163 | 2965 | 30 | 1.7 | 8.8 | -5.4 | 14 | -11.4 |
| | 600 . . . | 30 | 4310 | 4420 | 4165 | 30 | -6.1 | 1.4 | -14.2 | 6 | -18.8 |
| | 500 . . . | 30 | 5710 | 5854 | 5531 | 30 | -16.4 | -11.1 | -23.3 | 7 | -24.3 |
| | 400 . . . | 30 | 7351 | 7520 | 7127 | 30 | -28.1 | -23.5 | -36.5 | 4 | -32.8 |
| | 300 . . . | 30 | 9348 | 9537 | 9082 | 30 | -43.6 | -38.8 | -49.3 | — | — |
| | 200 . . . | 30 | 11995 | 12184 | 11800 | 30 | -55.2 | -46.5 | -62.1 | — | — |
| | 150 . . . | 29 | 13814 | 14015 | 13663 | 29 | -60.9 | -53.0 | -68.0 | — | — |
| | 100 . . . | 24 | 16286 | 16508 | 16142 | 24 | -66.8 | -61.8 | -72.2 | — | — |
| | 70 . . . | 10 | 18414 | 18550 | 18310 | 10 | -66.8 | -60.0 | -73.0 | — | — |
| | 50 . . . | 7 | 20477 | 20657 | 20370 | 7 | -63.1 | -56.8 | -65.6 | — | — |
| | 30 . . . | — | — | — | — | — | — | — | — | — | — |
| | 20 . . . | — | — | — | — | — | — | — | — | — | — |
| | 10 . . . | — | — | — | — | — | — | — | — | — | — |
| Helwan 0000 UT | Surface . . . | 29 | * 997m.b. | * 1003m.b. | * 992m.b. | 29 | 14.1 | 20.4 | 9.5 | 29 | 7.1 |
| | 1000 . . . | 29 | 116 | 165 | 20 | 11 | 12.7 | 14.7 | 11.0 | 11 | 7.9 |
| | 850 . . . | 29 | 1485 | 1525 | 1417 | 29 | 11.1 | 18.9 | 4.5 | 16 | -0.9 |
| | 700 . . . | 29 | 3082 | 3154 | 2991 | 29 | 2.8 | 7.9 | -3.9 | 8 | -11.6 |
| | 600 . . . | 29 | 4311 | 4414 | 4194 | 29 | -5.1 | 1.8 | -12.1 | 6 | -16.3 |
| | 500 . . . | 29 | 5719 | 5835 | 5562 | 29 | -14.5 | -6.8 | -23.0 | 2 | -21.7 |
| | 400 . . . | 29 | 7371 | 7506 | 7162 | 29 | -27.3 | -20.7 | -35.1 | 3 | -29.7 |
| | 300 . . . | 29 | 9378 | 9607 | 9310 | 29 | -42.3 | -36.7 | -46.9 | — | — |
| | 200 . . . | 29 | 12039 | 12295 | 11842 | 29 | -54.7 | -50.0 | -62.1 | — | — |
| | 150 . . . | 29 | 13855 | 14098 | 13720 | 29 | -60.6 | -53.4 | -68.7 | — | — |
| | 100 . . . | 29 | 16318 | 16587 | 16209 | 29 | -68.7 | -64.8 | -71.7 | — | — |
| | 70 . . . | 23 | 18496 | 18950 | 18350 | 23 | -67.4 | -59.7 | -73.2 | — | — |
| | 50 . . . | 19 | 20527 | 20346 | 20424 | 19 | -62.4 | -54.7 | -67.8 | — | — |
| | 30 . . . | 12 | 23754 | 23885 | 23640 | 12 | -53.8 | -48.0 | -57.7 | — | — |
| | 20 . . . | 10 | 26409 | 26860 | 26252 | 10 | -46.7 | -37.0 | -52.5 | — | — |
| | 10 . . . | — | — | — | — | — | — | — | — | — | — |
| Aswan 0000 UT | Surface . . . | 31 | * 989m.b. | * 994m.b. | * 982m.b. | 31 | 16.7 | 21.2 | 12.0 | 31 | -2.9 |
| | 1000 . . . | — | — | — | — | — | — | — | — | — | — |
| | 850 . . . | 31 | 1478 | 1514 | 1420 | 31 | 13.6 | 20.5 | 7.6 | 13 | -5.8 |
| | 700 . . . | 31 | 3090 | 3166 | 3044 | 31 | 5.7 | 11.9 | -1.0 | — | — |
| | 600 . . . | 31 | 4332 | 4436 | 4260 | 31 | -2.2 | 3.7 | -11.4 | 2 | -21.4 |
| | 500 . . . | 31 | 5755 | 5886 | 5634 | 31 | -11.8 | -7.0 | -20.6 | 2 | -23.6 |
| | 400 . . . | 31 | 7422 | 7580 | 7261 | 31 | -24.6 | -21.5 | -29.2 | — | — |
| | 300 . . . | 31 | 9451 | 9659 | 9264 | 31 | -39.7 | -30.5 | -44.0 | — | — |
| | 200 . . . | 30 | 12121 | 12422 | 11892 | 30 | -56.8 | -50.7 | -64.5 | — | — |
| | 150 . . . | 28 | 13912 | 14237 | 13642 | 28 | -65.4 | -59.6 | -70.0 | — | — |
| | 100 . . . | 23 | 16307 | 16415 | 16016 | 23 | -75.4 | -71.8 | -79.1 | — | — |
| | 70 . . . | 18 | 18381 | 18480 | 18080 | 18 | -72.6 | -63.6 | -78.3 | — | — |
| | 50 . . . | 16 | 20380 | 20647 | 20081 | 16 | -65.8 | -60.8 | -69.6 | — | — |
| | 30 . . . | 7 | 23603 | 23684 | 23453 | 7 | -54.9 | -50.1 | -57.5 | — | — |
| | 20 . . . | — | — | — | — | — | — | — | — | — | — |
| | 10 . . . | — | — | — | — | — | — | — | — | — | — |

N = Number of cases the element has been observed during the month.

* The atmospheric pressure corrected to the elevation of the radiosonde station.

Table B 1 (contd.)—UPPER AIR CLIMATOLOGICAL DATA

MARCH — 1964

| Station | Pressure Surface (Millibar) | Altitude of Pressure Surface (gpm) | | | | Temperature (°C) | | | | Dew Point (°C) | |
|----------------------|-----------------------------|------------------------------------|----------|----------|----------|------------------|-------|---------|--------|----------------|-------|
| | | N | Mean | Highest | Lowest | N | Mean | Highest | Lowest | N | Mean |
| Marsa Matruh 1200 UT | Surface . . . | 31 | * | * | * | 31 | 19.4 | 28.0 | 16.5 | 31 | 10.8 |
| | 1000 . . . | 31 | 1010m.b. | 1015m.b. | 1002m.b. | 31 | 18.4 | 27.5 | 14.3 | 31 | 10.0 |
| | 850 . . . | 31 | 130 | 175 | 62 | 31 | 9.8 | 18.0 | 3.4 | 26 | — 2.9 |
| | 700 . . . | 31 | 1500 | 1553 | 1430 | 31 | 1.9 | 7.4 | — 5.1 | 15 | —10.9 |
| | 600 . . . | 31 | 3092 | 3172 | 2998 | 31 | — 4.5 | 0.9 | —12.6 | 11 | —15.6 |
| | 500 . . . | 31 | 4319 | 4424 | 4200 | 31 | —15.9 | —10.4 | —22.3 | 8 | —26.0 |
| | 400 . . . | 31 | 5725 | 5924 | 5568 | 31 | —28.1 | —22.8 | —32.7 | 4 | —34.2 |
| | 300 . . . | 31 | 7361 | 7533 | 7195 | 31 | —42.9 | —38.5 | —47.3 | — | — |
| | 200 . . . | 31 | 9364 | 9580 | 9183 | 31 | —54.9 | —46.5 | —63.5 | — | — |
| | 150 . . . | 30 | 12009 | 12163 | 11832 | 30 | —59.7 | —53.5 | —68.4 | — | — |
| | 100 . . . | 26 | 13837 | 14002 | 13697 | 26 | —66.8 | —58.8 | —72.3 | — | — |
| | 70 . . . | 13 | 16335 | 16462 | 16235 | 13 | —67.4 | —63.0 | —72.9 | — | — |
| | 50 . . . | 9 | 18484 | 18660 | 18400 | 9 | —62.7 | —58.0 | —67.0 | — | — |
| | 30 . . . | 3 | 20534 | 20642 | 20428 | 3 | —50.7 | —43.0 | —56.8 | — | — |
| | 20 . . . | 2 | 23794 | 23929 | 23600 | 2 | —37.8 | —37.8 | —37.8 | — | — |
| | 10 . . . | — | 26412 | 26566 | 26259 | — | — | — | — | — | — |
| Helwan 1200 UT | Surface . . . | 30 | * | * | * | 30 | 24.2 | 29.2 | 17.6 | 30 | 3.2 |
| | 1000 . . . | 30 | 996m.b. | 1001m.b. | 990m.b. | 8 | 22.3 | 25.8 | 20.6 | 8 | 4.8 |
| | 850 . . . | 30 | 110 | 149 | 60 | 30 | 11.1 | 19.6 | 5.0 | 23 | — 4.1 |
| | 700 . . . | 30 | 1492 | 1538 | 1421 | 30 | 2.7 | 9.3 | — 4.2 | 10 | —12.9 |
| | 600 . . . | 30 | 3087 | 3170 | 2987 | 30 | — 4.8 | 0.7 | —10.0 | 11 | —18.2 |
| | 500 . . . | 30 | 4319 | 4422 | 4214 | 30 | —14.5 | —10.2 | —19.2 | 7 | —24.8 |
| | 400 . . . | 30 | 5727 | 5859 | 5575 | 30 | —27.0 | —23.4 | —31.8 | 5 | —33.9 |
| | 300 . . . | 30 | 7381 | 7560 | 7206 | 30 | —42.0 | —37.0 | —48.3 | — | — |
| | 200 . . . | 30 | 9392 | 9596 | 9278 | 30 | —54.5 | —48.8 | —63.9 | — | — |
| | 150 . . . | 30 | 12052 | 12274 | 11895 | 30 | —60.0 | —56.3 | —66.4 | — | — |
| | 100 . . . | 29 | 13873 | 14041 | 13737 | 29 | —67.5 | —60.6 | —72.9 | — | — |
| | 70 . . . | 25 | 16359 | 16487 | 16245 | 25 | —67.9 | —63.2 | —75.9 | — | — |
| | 50 . . . | 18 | 18499 | 18670 | 18380 | 18 | —62.4 | —59.0 | —66.7 | — | — |
| | 30 . . . | 6 | 20553 | 20660 | 20421 | 6 | —52.2 | —47.2 | —60.0 | — | — |
| | 20 . . . | 2 | 23789 | 23868 | 23713 | 2 | —49.0 | —42.8 | —55.1 | — | — |
| | 10 . . . | — | 26427 | 26582 | 26272 | — | — | — | — | — | — |
| Aswan 1200 UT | Surface . . . | 30 | * | * | * | 30 | 30.2 | 35.2 | 25.0 | 30 | 3.2 |
| | 1000 . . . | — | 989m.b. | 993m.b. | 982m.b. | — | — | — | — | — | — |
| | 850 . . . | 30 | — | — | — | 30 | 17.0 | 23.8 | 10.5 | 8 | — 5.8 |
| | 700 . . . | 30 | 1506 | 1549 | 1473 | 30 | 8.7 | 14.2 | 3.7 | — | — |
| | 600 . . . | 30 | 3133 | 3193 | 3095 | 30 | 0.6 | 5.7 | — 2.0 | — | — |
| | 500 . . . | 30 | 4387 | 4473 | 4356 | 30 | — 8.9 | — 3.6 | —12.2 | 2 | —24.5 |
| | 400 . . . | 30 | 5826 | 5911 | 5768 | 30 | —21.5 | —16.6 | —26.0 | 2 | —30.6 |
| | 300 . . . | 30 | 7513 | 7635 | 7438 | 30 | —38.6 | —32.2 | —42.0 | 2 | —41.0 |
| | 200 . . . | 29 | 9568 | 9666 | 9466 | 29 | —54.1 | —49.6 | —59.4 | — | — |
| | 150 . . . | 28 | 12270 | 12428 | 12128 | 28 | —63.3 | —59.8 | —69.3 | — | — |
| | 100 . . . | 23 | 14073 | 14222 | 13940 | 23 | —72.7 | —69.0 | —77.7 | — | — |
| | 70 . . . | 16 | 16504 | 16647 | 16401 | 16 | —71.5 | —68.0 | —73.8 | — | — |
| | 50 . . . | 10 | 18560 | 18710 | 18100 | 10 | —62.8 | —59.0 | —68.2 | — | — |
| | 30 . . . | 3 | 20592 | 20698 | 20464 | 3 | —52.4 | —51.6 | —53.3 | — | — |
| | 20 . . . | — | 23775 | 23911 | 23665 | — | — | — | — | — | — |
| | 10 . . . | — | — | — | — | — | — | — | — | — | — |

N = Number of observations of specified pressure surface.

* The atmospheric pressure corrected to the elevation of the radiosonde station.

**Table B 2.—MEAN AND EXTREME VALUES OF THE FREEZING LEVEL AND THE TROPOPAUSE ;
THE HIGHEST WIND SPEED IN THE UPPER AIR**

MARCH — 1964

| Station | Freezing Level | | | | | | | | | First Tropopause | | | | | | | | | Highest wind speed | | | |
|---------|---------------------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|------------------|----------------|------------------|----------------|----------------|------------------|----------------|----------------|------------------|--------------------|----------------|----------------------|----------------|
| | Mean | | | Highest | | | Lowest | | | Mean | | | Highest | | | Lowest | | | Altitude (gpm) | Pressure (mb.) | Direction (000—360)° | Speed in Knots |
| | Altitude (gpm) | Pressure (mb.) | Dew point (°C) | Altitude (gpm) | Pressure (mb.) | Dew point (°C) | Altitude (gpm) | Pressure (mb.) | Dew point (°C) | Altitude (gpm) | Pressure (mb.) | Temperature (°C) | Altitude (gpm) | Pressure (mb.) | Temperature (°C) | Altitude (gpm) | Pressure (mb.) | Temperature (°C) | | | | |
| 0000 UT | (N) | (N) | (N) | | | | | | | (N) | (N) | (N) | | | | | | | | | | |
| | Mersa Matruh(A) 3295 (30) | 683 (30) | —10.8 (13) | 4800 | 588 | — | 2060 | 782 | — | 11082 (26) | 232 (26) | —56.7 (26) | 13130 | 172 | —63.1 | 8140 | 348 | —431 | 10100 | 270 | 270 | 122 |
| | Helwan 3483 (29) | 667 (29) | —11.2 (10) | 4403 | 600 | — | 1400 | 855 | —3.9 | 11167 (29) | 236 (29) | —53.5 (29) | 15450 | 118 | —69.6 | 9090 | 314 | —41.6 | 13020 | 172 | 280 | 136 |
| | Aswan . . (A) 4003 (31) | 626 (31) | —22.6 (2) | 4960 | 562 | — | 2920 | 712 | — | 15561 (22) | 118 (22) | —75.6 (22) | 17040 | 089 | —76.8 | 10300 | 263 | —49.1 | 12800 | — | 250 | 145 |
| 1200 UT | (N) | (N) | (N) | | | | | | | (N) | (N) | (N) | | | | | | | | | | |
| | MersaMatruh (A) 3367 (31) | 677 (31) | —10.8 (16) | 4890 | 560 | —17.7 | 1870 | 808 | —2.4 | 11417 (31) | 222 (31) | —55.9 (31) | 14260 | 137 | —57.2 | 8970 | 308 | —44.5 | 4300 | 592 | 280 | 150 |
| | Helwan 3343 (30) | 671 (30) | —11.7 (14) | 4540 | 591 | — | 2130 | 785 | —4.6 | 11290 (30) | 230 (30) | —53.7 (30) | 14520 | 133 | —63.4 | 9190 | 309 | —40.2 | 11360 | 228 | 300 | 133 |
| | Aswan . . . (A) 4485 (30) | 591 (30) | —22.0 (2) | 5280 | 540 | — | 3140 | 615 | — | 15689 (19) | 133 (19) | —67.9 (19) | 17420 | 086 | —73.3 | 9860 | 282 | —45.0 | 15400 | 121 | 270 | 124 |

N = The number of cases the element has been observed during the month.

Table B 3.—NUMBER OF OCCURRENCES OF WIND DIRECTION WITHIN SPECIFIED RANGES AND THE MEAN SCALAR WIND SPEED AT THE STANDARD AND SELECTED PRESSURE SURFACES

MERSA MATRUH (A)—MARCH 1964

| Time | Pressure Surface Millibar | Wind between specified ranges of direction (000—360)° | | | | | | | | | | | | | | | | | | | | Number of calm winds | Total number of observations (TN) | Mean scalar wind speed (knots) | | | | |
|--------------|------------------------------|---|-----------|-----------------|-----------|-----------------|-----------|-----------------|-----------|-----------------|-----------|-----------------|-----------|-----------------|-----------|-----------------|-----------|-----------------|-----------|-----------------|-----------|-------------------------|--------------------------------------|-----------------------------------|-----------------|-----------|-----------------|-----------|
| | | 345 / 014 | | 015 / 044 | | 045 / 074 | | 075 / 104 | | 105 / 134 | | 135 / 164 | | 165 / 194 | | 195 / 224 | | 225 / 254 | | 255 / 284 | | | | | 285 / 314 | | 315 / 344 | |
| | | N | (ff) m | N | (ff) m | N | (ff) m | N | (ff) m | N | (ff) m | N | (ff) m | N | (ff) m | N | (ff) m | N | (ff) m | N | (ff) m | | | | N | (ff) m | N | (ff) m |
| 0000 U.T. | Surface | 1 | 17 | 0 | — | 0 | — | 1 | 3 | 5 | 7 | 0 | — | 3 | 11 | 2 | 6 | 1 | 8 | 6 | 10 | 7 | 13 | 3 | 13 | 1 | 30 | 10 |
| | 1000 | 1 | 17 | 0 | — | 0 | — | 0 | — | 4 | 6 | 0 | — | 3 | 11 | 2 | 6 | 1 | 8 | 6 | 12 | 8 | 13 | 3 | 13 | 2 | 30 | 10 |
| | 850 | 1 | 8 | 1 | 4 | 0 | — | 1 | 13 | 0 | — | 0 | — | 1 | 15 | 1 | 50 | 6 | 17 | 7 | 23 | 10 | 25 | 2 | 16 | 0 | 30 | 21 |
| | 700 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 1 | 7 | 1 | 21 | 2 | 35 | 6 | 31 | 11 | 31 | 9 | 28 | 0 | — | 0 | 30 | 29 |
| | 600 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 1 | 11 | 3 | 43 | 4 | 38 | 14 | 40 | 8 | 40 | 0 | — | 0 | 30 | 39 |
| | 500 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 2 | 35 | 3 | 33 | 12 | 53 | 10 | 49 | 0 | — | 0 | 27 | 48 |
| | 400 | 1 | 32 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 2 | 45 | 1 | 28 | 12 | 63 | 6 | 50 | 0 | — | 0 | 22 | 55 |
| | 300 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 2 | 64 | 1 | 24 | 7 | 66 | 2 | 84 | 2 | 72 | 0 | 14 | 66 |
| | 200 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 1 | 100 | 0 | — | 2 | 66 | 2 | 78 | 0 | — | 0 | 5 | 77 |
| | 150 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| | 100 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| | 70 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| | 60 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| | 50 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| | 40 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| 30 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | |
| 20 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | |
| 10 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | |
| 1200 U.T. | Surface | 5 | 9 | 2 | 10 | 1 | 12 | 4 | 10 | 1 | 17 | 0 | — | 1 | 9 | 3 | 15 | 1 | 9 | 1 | 14 | 6 | 22 | 6 | 20 | 0 | 31 | 15 |
| | 1000 | 5 | 9 | 1 | 9 | 2 | 10 | 4 | 10 | 1 | 20 | 0 | — | 0 | — | 4 | 14 | 1 | 9 | 1 | 14 | 7 | 22 | 5 | 20 | 0 | 31 | 15 |
| | 850 | 0 | — | 0 | — | 1 | 8 | 0 | — | 1 | 11 | 1 | 12 | 4 | 18 | 4 | 21 | 2 | 14 | 7 | 22 | 10 | 25 | 1 | 5 | 0 | 31 | 19 |
| | 700 | 0 | — | 0 | — | 0 | — | 0 | — | 1 | 7 | 0 | — | 1 | 27 | 3 | 9 | 7 | 33 | 8 | 37 | 10 | 28 | 1 | 14 | 0 | 31 | 28 |
| | 600 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 2 | 34 | 2 | 13 | 6 | 37 | 11 | 52 | 8 | 34 | 1 | 35 | 0 | 30 | 40 |
| | 500 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 1 | 58 | 1 | 20 | 7 | 45 | 13 | 55 | 7 | 55 | 1 | 33 | 0 | 30 | 51 |
| | 400 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 1 | 60 | 2 | 30 | 6 | 64 | 12 | 65 | 6 | 55 | 0 | — | 0 | 27 | 60 |
| | 300 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 1 | 64 | 1 | 66 | 6 | 69 | 4 | 114 | 6 | 58 | 0 | — | 0 | 18 | 75 |
| | 200 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 4 | 93 | 4 | 88 | 0 | — | 0 | — | 0 | 8 | 90 |
| | 150 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 1 | 110 | 1 | 61 | 0 | — | 0 | — | 0 | 2 | 86 |
| | 100 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| | 70 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| | 60 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| | 50 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| | 40 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| 30 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | |
| 20 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | |
| 10 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | |

N = The number of cases the wind has been observed from the range of direction during the month.
 TN = The total number of cases the wind has been observed for all directions during the month.

Table B 3 (contd.).—NUMBER OF OCCURRENCES OF WIND DIRECTION WITHIN SPECIFIED RANGES AND THE MEAN SCALAR WIND SPEED AT THE STANDARD AND SELECTED PRESSURE SURFACES

HELWAN—MARCH 1964

| Time | Pressure Surface Millibar | Wind between specified ranges of direction (000--360)° | | | | | | | | | | | | | | | | | | | | Number of calm winds | Total number of observations (TN) | Mean scalar wind speed (knots) | | | | |
|-----------|------------------------------|--|-----------|----------|-----------|----------|-----------|----------|-----------|----------|-----------|----------|-----------|----------|-----------|----------|-----------|----------|-----------|----------|-----------|-------------------------|--------------------------------------|-----------------------------------|----------|-----------|----------|-----------|
| | | 345 | | 015 | | 045 | | 075 | | 105 | | 135 | | 165 | | 195 | | 225 | | 255 | | | | | 285 | | 315 | |
| | | / 014 | | / 044 | | / 074 | | / 104 | | / 134 | | / 164 | | / 194 | | / 224 | | / 254 | | / 284 | | | | | / 314 | | / 344 | |
| | | N | (ff) m | N | (ff) m | N | (ff) m | N | (ff) m | N | (ff) m | N | (ff) m | N | (ff) m | N | (ff) m | N | (ff) m | N | (ff) m | | | | N | (ff) m | N | (ff) m |
| 0000 U.T. | Surface | 1 | 5 | 5 | 8 | 4 | 13 | 3 | 8 | 0 | — | 0 | — | 2 | 7 | 0 | — | 0 | — | 3 | 9 | 0 | — | 0 | — | 11 | 29 | 6 |
| | 1000 | 2 | 6 | 2 | 12 | 3 | 12 | 0 | — | 0 | — | 0 | — | 1 | 4 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 3 | 11 | 7 |
| | 850 | 2 | 14 | 0 | — | 1 | 10 | 0 | — | 0 | — | 0 | — | 1 | 21 | 2 | 18 | 2 | 30 | 8 | 19 | 11 | 19 | 2 | 20 | 0 | 29 | 19 |
| | 700 | 1 | 19 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 3 | 11 | 3 | 30 | 5 | 32 | 14 | 24 | 3 | 31 | 0 | 29 | 25 |
| | 700 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 2 | 20 | 1 | 36 | 13 | 38 | 9 | 41 | 4 | 22 | 0 | 29 | 35 |
| | 500 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 2 | 28 | 4 | 47 | 12 | 48 | 7 | 65 | 4 | 39 | 0 | 29 | 49 |
| | 400 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 2 | 59 | 3 | 36 | 9 | 74 | 5 | 59 | 5 | 51 | 0 | 24 | 60 |
| | 300 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 3 | 65 | 6 | 59 | 5 | 62 | 2 | 62 | 0 | 16 | 62 |
| | 200 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 4 | 75 | 3 | 64 | 4 | 105 | 0 | — | 0 | 11 | 83 |
| | 150 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 2 | 108 | 3 | 82 | 1 | 125 | 0 | — | 0 | 6 | 98 |
| | 100 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 1 | 76 | 1 | 36 | 0 | — | 0 | — | 0 | 2 | 56 |
| | 70 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| | 60 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| | 50 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| 40 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | |
| 30 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | |
| 20 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | |
| 10 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | |
| 1200 U.T. | Surface | 1 | 8 | 5 | 11 | 3 | 11 | 0 | — | 0 | — | 0 | — | 2 | 11 | 3 | 13 | 3 | 10 | 9 | 11 | 1 | 19 | 3 | 14 | 0 | 30 | 11 |
| | 1000 | 1 | 9 | 2 | 14 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 3 | 7 | 0 | — | 2 | 9 | 0 | 8 | 10 |
| | 850 | 2 | 12 | 2 | 9 | 2 | 12 | 0 | — | 2 | 12 | 0 | — | 1 | 6 | 3 | 18 | 6 | 17 | 5 | 20 | 6 | 19 | 1 | 20 | 0 | 30 | 16 |
| | 700 | 3 | 15 | 0 | — | 0 | — | 0 | — | 0 | — | 1 | 7 | 0 | — | 3 | 15 | 4 | 34 | 7 | 40 | 9 | 28 | 3 | 19 | 0 | 30 | 27 |
| | 600 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 1 | 16 | 7 | 37 | 11 | 35 | 5 | 33 | 5 | 39 | 0 | 29 | 35 |
| | 500 | 1 | 20 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 3 | 28 | 3 | 52 | 9 | 52 | 8 | 47 | 4 | 57 | 0 | 28 | 48 |
| | 400 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 2 | 36 | 1 | 28 | 11 | 64 | 6 | 65 | 2 | 52 | 0 | 22 | 59 |
| | 300 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 2 | 42 | 2 | 42 | 5 | 65 | 7 | 74 | 1 | 77 | 0 | 17 | 64 |
| | 200 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 1 | 92 | 6 | 70 | 5 | 95 | 0 | — | 0 | 12 | 82 |
| | 150 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 1 | 102 | 5 | 72 | 2 | 86 | 0 | — | 0 | 8 | 79 |
| | 100 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 2 | 57 | 0 | — | 0 | — | 0 | 2 | 57 |
| | 70 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| | 60 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| | 50 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| 40 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | |
| 30 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | |
| 20 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | |
| 10 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | |

N = The number of cases the wind has been observed from the range of direction during the month.

TN = The total number of cases the wind has been observed for all directions during the month.

Table B 3 (contd.)—NUMBER OF OCCURRENCES OF WIND DIRECTION WITHIN SPECIFIED RANGES AND THE MEAN SCALAR WIND SPEED AT THE STANDARD AND SELECTED PRESSURE SURFACES.

ASWAN (A) — MARCH 1964

| Time | Pressure Surface Millibar | Wind between specified ranges of direction (000—360)° | | | | | | | | | | | | | | | | | | | | Number of calm winds | Total number of observations (TN) | Mean scalar wind speed (knots) | | | | |
|--------------|------------------------------|---|-----------|----------|-----------|----------|-----------|----------|-----------|----------|-----------|----------|-----------|----------|-----------|----------|-----------|----------|-----------|----------|-----------|-------------------------|--------------------------------------|-----------------------------------|----------|-----------|----------|-----------|
| | | 345 | | 015 | | 045 | | 075 | | 105 | | 135 | | 165 | | 195 | | 225 | | 255 | | | | | 285 | | 315 | |
| | | / 014 | | / 044 | | / 074 | | / 104 | | / 134 | | / 164 | | / 194 | | / 224 | | / 254 | | / 284 | | | | | / 314 | | / 344 | |
| | | N | (ff) m | N | (ff) m | N | (ff) m | N | (ff) m | N | (ff) m | N | (ff) m | N | (ff) m | N | (ff) m | N | (ff) m | N | (ff) m | | | | N | (ff) m | N | (ff) m |
| 0000 U.T. | Surface | 18 | 12 | 5 | 11 | 1 | 9 | 1 | 9 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 2 | 9 | 1 | 9 | 0 | — | 3 | 31 | 10 |
| | 1000 | 7 | 12 | 5 | 9 | 1 | 12 | 0 | — | 1 | 11 | 0 | — | 2 | 6 | 0 | — | 2 | 10 | 3 | 11 | 5 | 16 | 5 | 21 | 0 | 31 | 13 |
| | 850 | 2 | 10 | 2 | 9 | 0 | — | 1 | 8 | 0 | — | 0 | — | 0 | — | 0 | — | 5 | 24 | 7 | 26 | 11 | 19 | 3 | 17 | 0 | 31 | 20 |
| | 700 | 1 | 17 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 1 | 8 | 4 | 34 | 13 | 34 | 9 | 25 | 3 | 25 | 0 | 31 | 29 |
| | 600 | 1 | 27 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 5 | 31 | 14 | 43 | 9 | 37 | 2 | 28 | 0 | 31 | 38 |
| | 500 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 4 | 49 | 18 | 45 | 6 | 54 | 2 | 32 | 0 | 30 | 46 |
| | 400 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 4 | 56 | 18 | 54 | 7 | 68 | 0 | — | 0 | 29 | 57 |
| | 300 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 3 | 100 | 15 | 68 | 2 | 56 | 0 | — | 0 | 20 | 72 |
| | 200 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 11 | 75 | 1 | 55 | 1 | 46 | 0 | 13 | 72 |
| | 150 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 4 | 60 | 1 | 68 | 0 | — | 0 | 5 | 62 |
| | 100 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | — | — | — | — | — | — | — | — | — |
| | 70 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| | 60 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| | 50 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| 40 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | |
| 30 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | |
| 20 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | |
| 10 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | |
| 1200 U.T. | Surface | 18 | 9 | 2 | 8 | 0 | — | 1 | 6 | 0 | — | 0 | — | 0 | — | 1 | 5 | 1 | 12 | 1 | 20 | 2 | 11 | 2 | 8 | 2 | 30 | 9 |
| | 1000 | 8 | 15 | 0 | — | 2 | 8 | 3 | 7 | 2 | 9 | 0 | — | 1 | 10 | 0 | — | 1 | 17 | 2 | 22 | 6 | 18 | 5 | 12 | 0 | 30 | 14 |
| | 850 | 0 | — | 0 | — | 1 | 16 | 1 | 4 | 0 | — | 0 | — | 1 | 10 | 0 | — | 3 | 19 | 6 | 27 | 10 | 17 | 6 | 16 | 2 | 30 | 17 |
| | 700 | 1 | 12 | 1 | 8 | 0 | — | 0 | — | 0 | — | 0 | — | 2 | 14 | 5 | 23 | 11 | 30 | 8 | 25 | 2 | 24 | 0 | 0 | 0 | 30 | 25 |
| | 600 | 1 | 11 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 1 | 24 | 3 | 25 | 20 | 40 | 3 | 34 | 2 | 32 | 0 | 0 | 0 | 30 | 36 |
| | 500 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 5 | 45 | 16 | 54 | 6 | 42 | 1 | 38 | 1 | 29 | 48 |
| | 400 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 2 | 81 | 14 | 51 | 7 | 59 | 1 | 59 | 0 | 24 | 56 |
| | 300 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 3 | 61 | 13 | 71 | 3 | 71 | 0 | — | 0 | 19 | 70 |
| | 200 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 10 | 70 | 2 | 60 | 0 | — | 0 | 12 | 68 |
| | 150 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 4 | 70 | 0 | — | 0 | — | 0 | 4 | 70 |
| | 100 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | — | — | — | — | — | — | — | — | — |
| | 70 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| | 60 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| | 50 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| 40 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | |
| 30 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | |
| 20 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | |
| 10 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | |

N. = The number of cases the wind has been observed from the range of direction during the month.

T.N. = The total number of cases the wind has been observed for all directions during the month.

REVIEW OF AGRO-METEOROLOGICAL STATION AT EL KASR

MARCH 1964

The month was mainly unsettled, with successive cold and warm spells of short duration, though slightly warmer and more humid than normal.

The month started with a minor cold wave giving the lowest soil temperatures at depths 0.3, 2, 5, 10 & 20 cms. on the 4th and for the depths 50, 100 & 200 cms. on the 1st. Also the lowest value of evaporation from pan class A occurred on the 3rd.

The most pronounced warm spell started on the 7th with the peak on the 9th when the absolute maximum air temperature (10.5°C above normal), the highest values of evaporation from pan class A and Piche in the screen (8.9 mms. above normal), the water vapour pressure and the water vapour pressure deficit occurred as well as the lowest values of the relative humidity (47% below normal).

A distinguished minor cold wave started on the 24th and gave rise to the absolute minima of air temperature at 2 metres and 5 cms. above ground level on the 27th and also those of soil temperatures at depths 0.3 & 1 cm.

A warm spell prevailed towards the end of the month when the absolute maxima of soil temperatures at depths 0.3, 2, 50 & 100 cms. were observed on the 30th, whereas the highest minima at depths 2, 5, 10, 20 & 200 cms. took place on the 29th.

Cold air invaded Matruh area at the beginning of the 3rd week giving showers and the highest wind speed at 50, 100, 200 & 300 cms. above ground level on the 18th. The lowest value of Piche evaporation (5.0 mms. below normal) was observed on the 21st. associated with the minor cold wave.

The mean air temperature, relative humidity at 2 metres and total rainfall were generally above normal by amounts 1.2°C , 12% and 7.9 mms. respectively.

REVIEW OF AGRO-METEOROLOGICAL STATION AT TAHRIR

MARCH 1964

This month was unsettled with khamsin conditions prevailing during the first two weeks with occasional rising sand.

The month started with a cold wave giving the absolute minimum temperature of the air at 2 metres and 5 cms. above ground on the 1st as well as those of the soil down to 1 metre deep.

A minor warm spell started on the 4th with the lowest value of vapour pressure and the highest values of evaporation from pan class A and Piche in the screen and in the free air occurring on the 5th.

The pronounced warm spell prevailed during the period from 7th to 10th giving the absolute maximum air temperature in the screen on the 9th and those of soil temperatures for the depths 0.3, 1 and 2 cms. on the 10th and also the highest minimum air temperature in the screen.

This warm spell was followed by an intense cold wave, though of short duration with the lowest maximum air temperature and the shortest duration of sunshine on the 11th.

Khamsin conditions started on the 15th with the peak on the 17th when sand storms occurred with the maximum wind speed of 43 knots. A moderate cold front passed on the following day giving light showers and once more the shortest duration of sunshine as well as the lowest values of evaporation for pan class A and Piche.

A warm spell prevailed towards the end of the month with the absolute maxima of soil temperatures for the layer from 5 to 100 cms. on the 31st.

Comparing this month with March 1963, we find that the means of evaporation and vapour pressure were higher by 1.3°C and 0.9 mms. respectively while the mean relative humidity was less by 3%. The mean of Piche evaporation was the same as last year while pan A evaporation was less by 0.37 mms. The mean wind speed at 2 metres was more by 0.2 m/sec. and sunshine duration was more by 16.2 hours. The total rainfall was 0.6 mms. against 4.4 mms. for last year.

As for extreme soil temperatures the maxima were less by 3.3 to 0.3°C for the surface layer down to the depth of 20 cms. except that at 5 cms. where it was more by 0.8°C. From 0.5 to 2 metres they were more by 0.1 to 0.2°C, becoming less again in the subsequent layer.

Without taking into account the first centimetre where the absolute minima were less by 1.0°C, the first half metre yielded higher minima by 0.3 to 2.4°C, while no change was observed for further depths,

REVIEW OF AGRO-METEOROLOGICAL STATION AT GIZA

MARCH 1964

This month was unsettled with successive cold and warm spells of short duration, though mild and rather dry compared with the normal values.

The month started with a cold night when the minimum air temperature was about normal, whereas the soil temperatures in the dry, wet and grass fields showed their absolute minimum values for the month in the early morning of the 1st. day for the surface layer down to 200 cms. depth and also the absolute minima of air temperature at 5 cms. above ground, although these values were higher than those of March 1963 by variable amounts not exceeding 3°C.

The first warm spell started on the 3rd. and gave rise to the highest values of Piche evaporation in the free air at 120, 60 and 1 cms. above ground level on the 5th as well as the lowest vapour pressure in the screen.

A pronounced warm spell started on the 7th with the peak on the 10th when the absolute value of maximum air temperature was attained (6.3°C above normal), whereas the absolute maxima of soil temperatures at depths 0.3 cm. in the wet and grass fields and that at 1 cm. depth in the wet field took place on the previous day; in the dry field, the absolute maxima for soil temperatures at depths 0.3, 1 & 2 cms. occurred on the 17th associated with the peak of a minor warm spell.

The lowest values of maximum air temperature were associated with the peak of a cold wave on the 18th (5°C below normal) when the smallest range of air temperature was observed and also the lowest values of Piche evaporation in the free air and in the screen (1.4 mms. below normal).

The absolute minimum of air temperature at 2 metres above ground level occurred with the peak of a cold wave on the 27th (2.4°C below normal).

A remarkable warm spell started on the 28th giving rise to the highest minimum air temperature in the screen (4°C above normal) on the 30th, when the highest values of vapour pressure and soil temperatures in the wet field at depths 2, 5, 10 & 20 cms. were recorded. On the last day of the month, the absolute maxima of soil temperatures for the layer 10 to 200 cms. in the dry and grass fields were observed and also the highest value of Piche evaporation in the screen (6.4 mms. above normal).

Compared with March 1963, the means of air temperature at 2 metres for the day, night time and day time were generally higher by amounts 1.6, 1.7 & 1.7°C respectively. The means of the surface wind speed at 2 metres were also higher by 0.8, 0.9 & 0.5 m/sec. for the day, night time and day time respectively. The total actual duration of bright sunshine was more by 1.2 hours and amounted to 72% out of the total possible duration. The mean pan class A evaporation of the day was higher by 1.23 mms. probably for the increase of mean wind speed at 2 metres. No material differences were observed in the total potential evaporation and evapo-transpiration for grass (Libia).

REVIEW OF AGRO-METEOROLOGICAL STATION AT KHARGA

MARCH 1964

This month was mainly unsettled with successive cold and warm spells, though slightly warmer and drier compared with the normal values.

It started with a cold wave giving the absolute minima of air temperature on the 5th both at 2 metres above ground level (5.6°C below normal) and at 5 cms. as well as for soil temperatures down to 10 cms. deep. For further depths, such minima took place on the 1st day when the highest humidity (29% above normal) and the lowest values of evaporation from pan class A and Piche in the screen (7.9 mms. below normal) and in the free air at the different levels occurred.

Another cold wave started on the 11th when the highest values of vapour pressure and wind speed at 50, 100, 200 & 300 cms. happened with the lowest maximum of air temperature on the 12th (2.8°C below normal).

A pronounced warm spell prevailed towards the end of the month, giving the absolute maxima of temperature for the air at 2 metres and for the soil down to the depth of 1 metre on the 31st, as well as the highest minima of air temperature at 2 metres (5°C above normal) and at 5 cms. The highest values of evaporation from pan class A and Piche in the screen and in the free air occurred on the same day when the lowest values of the relative humidity and vapour pressure also occurred. It is of interest to find that much medium and high clouds prevailed on the 29th causing sunshine duration 5.6 hours only on that day while the possible duration is more than 12 hours.

The mean temperature of the day and the Piche evaporation in the screen were higher than the normal values by 1.8°C and 2.3 mms. respectively, whereas the mean relative humidity was lower by 19%.

Table C 1.—AIR TEMPERATURE AT 2 METRES ABOVE GROUND

MARCH — 1964

| STATION | Air Temperature (°C) | | | | | Mean Duration in hours of daily air temperature above the following values | | | | | | | | | | |
|----------------|----------------------|-----------|-----------------|-----------------|---------------|--|------|------|------|------|------|------|------|------|------|------|
| | Mean Max. | Mean Min. | Mean of the day | Night time mean | Day time mean | -5°C | 0°C | 5°C | 10°C | 15°C | 20°C | 25°C | 30°C | 35°C | 40°C | 45°C |
| Kafr | 22.0 | 10.8 | 16.0 | 13.8 | 18.3 | 24.0 | 24.0 | 24.0 | 22.4 | 14.4 | 2.8 | 0.5 | 0.0 | 0.0 | 0.0 | 0.0 |
| Tahrir | 24.8 | 10.2 | 16.8 | 14.0 | 19.6 | 24.0 | 24.0 | 24.0 | 22.9 | 13.9 | 7.0 | 1.5 | 0.0 | 0.0 | 0.0 | 0.0 |
| Giza | 25.0 | 10.2 | 17.5 | 15.0 | 19.7 | 24.0 | 24.0 | 24.0 | 23.0 | 15.4 | 7.5 | 2.1 | 0.0 | 0.0 | 0.0 | 0.0 |
| Kharga | 30.2 | 10.9 | 21.0 | 17.6 | 24.1 | 24.0 | 24.0 | 24.0 | 23.4 | 19.1 | 13.0 | 7.2 | 2.1 | 0.0 | 0.0 | 0.0 |

Table C 2.—ABSOLUTE VALUES OF AIR TEMPERATURE AT 2 METRES ABOVE GROUND, ABSOLUTE MINIMUM AIR TEMPERATURE AT 5cms ABOVE GROUND OVER DIFFERENT FIELDS

MARCH — 1964

| STATION | Max. Temp. at 2 metres | | | | Min. Temp. at 2 metres | | | | Min. Temp. at 5 cms. above | | | |
|-----------------|------------------------|------|--------|--------|------------------------|------|--------|------|----------------------------|------|-------|------|
| | Highest | | Lowest | | Highest | | Lowest | | Dry Soil | | Grass | |
| | Value | Date | Value | Date | Value | Date | Value | Date | Value | Date | Value | Date |
| El Kafr | 30.3 | 9 | 18.4 | 3 | 15.0 | 30 | 6.4 | 27 | 4.7 | 27 | — | — |
| Tahrir | 30.1 | 9 | 18.7 | 11 | 15.2 | 10 | 6.9 | 1 | 4.3 | 1 | — | — |
| Giza | 30.7 | 10 | 19.7 | 11, 18 | 13.4 | 30 | 6.9 | 27 | 2.3 | 1 | 0.8 | 1 |
| Kharga | 35.0 | 31 | 25.2 | 12 | 18.2 | 31 | 6.0 | 5 | 4.3 | 5 | — | — |

Table C 3.—(SOLAR + SKY) RADIATION, DURATION OF BRIGHT SUNSHINE, RELATIVE HUMIDITY & VAPOUR PRESSURE AT 2 METRES ABOVE GROUND, EVAPORATION & RAINFALL

MARCH — 1964

| | Solar + Sky Radiation gm. cal/cm ² | Duration of Bright Sunshine (hours) | | | Relative Humidity % | | | | | | Vapour Pressure (mms) | | | | | Evapora- tion(mms) | | Rainfall (mms) | | | |
|-------|--|--|---------------------------|----|----------------------|----------|-------------|-----------|--------|------|-----------------------|------------|---------|------|--------|-----------------------|-------|----------------|-------------------------|-------------------------|------|
| | | Total Actual | Total Possible monthly | % | Duration in hours | | Mean of day | 1200 U.T. | Lowest | Date | Mean of day | 1200 UT | Highest | Date | Lowest | Date | Piche | Pan class (A) | Total Amount monthly | Max. fall in one day | Date |
| | | | | | > 90% | > 80% | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | |
| Asut. | 420.1 | 275.0 | 371.9 | 74 | — | — | 77 | 60 | 18 | 9 | 10.1 | 10.4 | 13.5 | 29 | 5.6 | 9 | — | 6.34 | 14.0 | 14.0 | 17 |
| r | 471.7 | 273.8 | 372.0 | 74 | 4.2 | 8.2 | 66 | 38 | 17 | 17 | 9.0 | 8.0 | 13.2 | 29 | 3.9 | 5 | 11.7 | 7.08 | 0.6 | 0.6 | 18 |
| .. | 500.1 | 267.2 | 372.0 | 72 | 2.4 | 5.6 | 62 | 37 | 17 | 14 | 8.7 | 7.9 | 12.5 | 30 | 4.7 | 5.14 | 11.3 | 7.20 | 0.3 | 0.3 | 18 |
| As. | 497.0 | 327.5 | 372.6 | 88 | 0 | 0 | 27 | 18 | 3 | 30 | 4.8 | 4.9 | 9.2 | 11 | 0.4 | 30 | 24.9 | 11.25 | 0.0 | — | — |



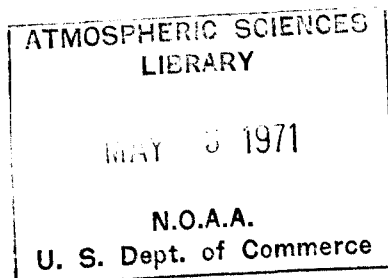
UNITED ARAB REPUBLIC

MONTHLY WEATHER REPORT

VOLUME 7

NUMBER 4

APRIL, 1964



U.D.C. 551. 506.1 (62)

MINISTRY OF SCIENTIFIC RESEARCH—METEOROLOGICAL DEPARTMENT
CAIRO

PUBLICATIONS OF THE METEOROLOGICAL DEPARTMENT OF THE UNITED ARAB REPUBLIC—CAIRO

In fulfilment of its duties as the National Meteorological service for the U.A.R., the Meteorological Department issues several reports and publications on weather, climate and agrometeorology. The principal publications are described on this page.

Orders for publications should be addressed to :—

“The Director General, Meteorological Department, Kubri-el-Qubbeh—CAIRO”.

THE DAILY WEATHER REPORT

This report is printed daily in the Meteorological Department. It contains surface and upper air observations carried by the relevant networks of the Republic and made at the four main synoptic hours of observations (00, 06, 12 and 18 U.T.); as well as ship observations over the Eastern Mediterranean and north Red Sea made at the same times.

It also contains two surface synoptic charts at 00 and 12 U.T. and two upper air charts for the standard isobaric surfaces 700 & 500 mbs. at both 00 and 12 U.T.

In compliance with resolution 8 (EC-XIII) of WMO, foreign upper air data included in Cairo Subregional Broadcast are also given in this report.

THE MONTHLY WEATHER REPORT

First issued in 1909, the Monthly Weather Report served to give a brief summary of the weather conditions that prevailed over Egypt during the month, with a table showing the mean values for few meteorological elements and their deviations from the normal values. From 1954 to 1957 this report was in a rapid state of development and extension resulting into a voluminous report on January 1958 giving surface, upper air, and agro-meteorological data for U.A.R.

THE AGRO-METEOROLOGICAL ABRIDGED MONTHLY REPORT

Gives a review of weather experienced in the agro-meteorological stations of the U.A.R. as well as monthly values of certain elements.

THE ANNUAL REPORT

This report gives annual values and statistics for the various meteorological elements, together with a summary of the weather conditions that prevailed during all months of the year .

CLIMATOLOGICAL NORMALS FOR EGYPT

The normals, long averages and statistical data are given in one edition for stations in Egypt from the date of opening of each station up to 1945, A new voluminous edition was issued in March 1968 which brings normals and mean values up till 1960.



UNITED ARAB REPUBLIC

MONTHLY WEATHER REPORT

VOLUME 7

NUMBER 4

APRIL, 1964

U.D.C. 551. 506.1 (62)

**MINISTRY OF SCIENTIFIC RESEARCH—METEOROLOGICAL DEPARTMENT
CAIRO**

*Printed at the General Organization
for Government Printing Offices Cairo
. Under-Secretary of State*

ALY SULTAN ALY
Chairman of the Board of Directors

4450-1969-200

CONTENTS

| | PAGE |
|--|------|
| Genral Summary of Weather Conditions | 1-2 |

SURFACE DATA

| | |
|---|-----|
| Table A1.—Monthly values of the Atmospheric Pressure, Air Temperature, Relative Humidity, Bright Sunshine Duration and Piche Evaporation | 3 |
| „ A2.—Maximum and Minimum Air Temperatures | 4 |
| „ A3.—Sky Cover and Rainfall | 5 |
| „ A4.—Number of Days of Occurrence of Miscellaneous Weather Phenomena | 6 |
| „ A5.—Number in Hours of Occurrences of Concurrent Surface Wind Speed and Direction Recorded Within Specified Ranges | 7,8 |

UPPER AIR DATA

| | |
|--|-------|
| Table B1.—Monthly Means and Monthly Absolute Higher & Lower Values of Altitude, air Temperature & Dew point at Standard and Selected Pressure Surface | 9,10 |
| „ B2.—Mean and Extreme values of The Freezing Level and The Tropopause; The Highest Wind Speed in The Upper Air | 11 |
| „ B3.—Number of Occurences of Wind Direction Within Specified Ranges and The Mean Scalar Wind Speed at the Standard and Selected Pressure Surfaces | 12-14 |

AGRO-METEOROLOGICAL DATA

| | |
|--|-------|
| Review of Agro Meteorological Stations | 15-18 |
|--|-------|

| | |
|---|----|
| Table C1.—Air Temperature at 2 Metres Above Ground | 19 |
| „ C2.—Absolute Values of Air Temperature at 2 Metres Above Ground, Absolute Minimum Air Temperature at 5 Cms. Above Ground Over Different Field | 19 |
| „ C3.—(Solar + Sky) Radiation, Duration of Bright Sunshine, Relative Humidity and Vapour Pressure at 2 Metres Above Ground, Evaporation and Rainfall | 19 |
| „ C4.—Extreme Soil Temperature at Different Depths in Different Fields | 20 |
| „ C5.—Surface wind | 20 |

GENERAL SUMMARY OF WEATHER CONDITIONS

APRIL 1964

Generally mild, but warm the 1st week in the northern and middle parts; alternatively very hot the 1st half, rather warm the 2nd half in the southern parts. Local heavy rain over Delta Area and East Mediterranean coast on the 20th.

GENERAL DESCRIPTION OF WEATHER

Four consecutive khamsin disturbances traversed the country round the 4th, 6th, 20th and 26th, the first two of which prevailed most of the 1st week and were excessive. Mild periods separated the prevailing khamsin waves. Transitory cold fronts were preceded with widespread sandstorms or sandrising. Occasional rain and isolated thunder cells were reported over scattered localities in the northern and middle parts of the Republic during the third week. Rain was locally heavy in particular over Lower Egypt and East Mediterranean coast on the 20th when 22.8 mms, 42.3 mms, & 3.4 mms of rain fell over Port Said, El Arish, & Tanta respectively which exceeded appreciably the corresponding normal monthly totals. Elsewhere rain was light and its monthly total was rather subnormal.

PRESSURE DISTRIBUTION

The normal pressure distribution over the Mediterranean and North Africa vicinities was disturbed this month five times, either due to the transitory secondary depressions along their preferred North Africa track or due to the deep northward elongation of the Sudan trough.

This month started with a complex low pressure system of pronounced vertical structure as far as the 300 mb level over West Mediterranean. It deepened rapidly while enlarging its warm sector and moving northeastwards, attached khamsin secon-

daries at its foot over North Africa showed rapid displacements along more or less an eastward track. On the 4th the first khamsin disturbance traversed East Mediterranean, and by the 6th a second khamsin disturbance followed, when the main primary traversed the Black sea northeastwards.

On the 9th a third secondary depression developed over Algiers at the lee side of Atlas mountains. It followed a coastal track and traversed rapidly the U.A.R. on the 12th as a coastal khamsin. On the 13th it shifted NE-wards towards Iraq. During its life history it was reflected upwards as far as the 500 mb level.

The 4th and last khamsin disturbance during this month developed on the 22nd over the Libyan Desert. It proceeded eastwards while deepening slightly; traversed western parts of U.A.R. on the 25th and southeast Mediterranean corner on the 26th where it amalgamated with extension of the northern arm of the Sudan trough.

It is worth to mention that high pressure operated over the Mediterranean and North Africa regions otherwise, with the exception of the 18th and 19th when the Sudan trough showed a marked northward oscillation towards southeast Mediterranean corner, where the barometric pressure fell slightly below its normal.

The subtropical jet stream was evident most of the month in the upper troposphere over the U.A.R. at about 200 mb level.

The polar jet stream was evident north of latitude 30° N, only in association with the travelling Mediterranean depressions at about 300 mb level.

The highest wind speeds recorded at Mersa Matruh, Helwan and Aswan were 160, 150, 120 knots on the 6th, 12th and 16th respectively.

SURFACE WIND

The prevailing winds were light/moderate, generally Nly and NWly. Moderate/fresh Sly and SWly winds blew in advance of transitory khamsin disturbances, while fresh/strong W/NW winds blew in their associations and at their rears. In particular over the western Mediterranean coastal strip and over Red Sea district fresh/strong winds were frequent most days of the month.

Gales were reported at: Sallum on the 25th; El-Kasr on the 4th; Balteam on the 12th; Port Said on the 20th; Abu Sueir on the 6th and 12th; Zaher on the 6th; Fayed on the 6th, 12th, 16th and 20th; Kabrit on the 6th; Mostafa Helmi and Asyout on the 12th and at Hurghada on the 16th and 21st.

TEMPERATURE

Maximum air temperature was subnormal in general over the northern and middle parts of the Republic, apart from the periods (1 st- 6 th), 12 th, (24th-26th) during which it exceeded variably its normal in khamsin

disturbances. In the southern part maximum air temperature was above normal during the first half of the month and the period (24th - 26th) and was subnormal otherwise.

The absolute maximum temperature for the Republic was 44.5°C reported at Dakhla on the 6th.

Variability in minimum temperature was generally similar to variability in maximum temperature.

The absolute minimum temperature for the Republic was 5.6°C reported at Dakhla on the 22nd.

PRECIPITATION

This month was almost rainless, apart from the third week which was characterized with few widespread rainy days in the northern parts of the Republic, in particular the 16th and 20th during which rain was associated with occasional thunderstorms. On the 20th rain was heavy over scattered localities in the East Mediterranean coastal strip and Delta. It is worth to mention that rainfall on the 20th exceeded appreciably the total monthly fall of April in several stations as Port Said, El Arish & Tanta.

The absolute daily rainfall for the Republic was 42.3 mms reported at El Arish on the 20th, which was also the absolute monthly rainfall for the Republic.

Cairo 25 / 6 / 1970

M. F. TAHA
Under Secretary of State
Director General
Meteorological Department

**Table A 1.—MONTHLY VALUES OF THE ATMOSPHERIC PRESSURE, AIR TEMPERATURE,
RELATIVE HUMIDITY, BRIGHT SUNSHINE DURATION & PICHE EVAPORATION**

APRIL — 1964

| STATION | Atmospheric Pressure (mbs) M.S.L | | Air Temperature °C | | | | | | | | | Relative Humidity % | | Bright Sunshine Duration (Hours) | | | Piche Evaporation mms. Mean |
|-----------------------|----------------------------------|------------------------|--------------------|------------------------|----------|------------------------|----------|----------|-----------------------|----------|-----------------------|---------------------|-----------------------|----------------------------------|----------------|------|-----------------------------|
| | Mean | D.F. Normal or Average | Maximum | | Minimum | | A+B 2 | Dry Bulb | | Wet Bulb | | Mean | D.F Normal or Average | Total Actual | Total Possible | % | |
| | | | (A) Mean | D.F. Normal or Average | (B) Mean | D.F. Normal or Average | | Mean | D.F Normal or Average | Mean | D.F Normal or Average | | | | | | |
| Sallum | 1014.9 | +1.4 | 22.8 | —1.0 | 14.2 | 0.0 | 18.5 | 18.1 | —0.5 | 14.1 | +0.3 | 62 | + 7 | — | — | — | 8.3 |
| Mersa Matruh (A) | 1015.4 | +0.8 | 23.0 | —0.7 | 12.5 | +0.7 | 17.2 | 17.0 | —0.4 | 13.4 | —0.1 | 64 | 0 | 269.2 | 388.8 | 69.2 | 8.8 |
| Alexandria . . (A) | 1014.6 | +0.2 | 23.4 | —0.2 | 13.1 | —0.4 | 18.2 | 17.8 | —0.5 | 13.9 | —0.7 | 62 | — 6 | 286.7 | 388.2 | 73.8 | 5.9 |
| Port Said . . . (A) | 1014.3 | +0.2 | 21.6 | —1.0 | 15.1 | —1.0 | 18.4 | 18.1 | —0.7 | 14.9 | +1.2 | 69 | — 3 | 276.1 | 388.2 | 71.1 | 5.1 |
| El Arish | 1013.9 | +1.4 | 23.5 | —0.1 | 13.4 | +0.2 | 18.4 | 18.2 | —0.5 | 14.9 | —0.5 | 68 | — 1 | 279.8 | 388.2 | 72.1 | 5.2 |
| Ghazza | 1013.7 | +1.1 | 20.3 | —1.4 | 13.3 | —0.5 | 16.8 | 17.7 | —0.4 | 14.8 | —0.6 | 71 | — 2 | 238.4 | 388.8 | 61.3 | 5.3 |
| Tanta | 1013.5 | — | 26.5 | — | 10.9 | — | 18.7 | 17.8 | — | 13.6 | — | 60 | — | 285.7 | 387.8 | 73.7 | 5.3 |
| Cairo (A) | 1014.0 | +0.3 | 27.6 | —0.6 | 13.5 | —0.4 | 20.6 | 19.9 | —1.0 | 13.4 | —1.3 | 43 | — 5 | — | — | — | 14.5 |
| Fayoum | 1013.8 | — | 28.8 | — | 13.0 | — | 20.9 | 20.3 | — | 13.8 | — | 44 | — | — | — | — | 8.7 |
| Minya (A) | 1013.2 | +0.1 | 29.6 | —1.0 | 11.4 | —0.4 | 20.5 | 20.4 | —0.8 | 13.8 | —0.1 | 44 | + 3 | — | — | — | 8.7 |
| Assyout (A) | 1012.9 | +0.8 | 30.7 | —1.2 | 15.0 | —0.2 | 22.8 | 23.3 | —0.6 | 13.0 | —0.5 | 24 | 0 | — | — | — | 5.8 |
| Luxor (A) | 1010.9 | +0.3 | 34.9 | +0.1 | 16.6 | +0.9 | 25.8 | 26.2 | +0.3 | 14.8 | —0.3 | 22 | — 4 | — | — | — | 12.0 |
| Aswan (A) | 1010.7 | +1.3 | 36.0 | +0.3 | 18.3 | —0.3 | 27.2 | 27.5 | +0.3 | 13.6 | +0.2 | 11 | — 1 | — | — | — | 22.3 |
| Siwa | 1014.1 | +0.4 | 29.4 | —0.5 | 13.9 | +1.8 | 21.6 | 21.8 | +0.1 | 12.8 | —0.4 | 29 | — 4 | — | — | — | 16.6 |
| Bahariya | 1013.9 | +1.2 | 29.9 | —0.8 | 13.4 | 0.0 | 21.6 | 21.9 | —0.7 | 12.8 | —0.8 | 28 | — 2 | — | — | — | 9.7 |
| Farafra | 1014.5 | — | 30.9 | — | 13.6 | — | 22.2 | 22.3 | — | 12.6 | — | 25 | — | — | — | — | 17.4 |
| Dakhla | 1011.5 | +1.3 | 33.4 | +0.7 | 12.9 | —1.4 | 23.2 | 23.5 | —0.3 | 12.5 | 0.0 | 19 | + 1 | — | — | — | 16.6 |
| Kharga | 1012.8 | — | 33.9 | — | 16.9 | — | 25.4 | 25.5 | — | 12.9 | — | 14 | — | 328.1 | 382.0 | 85.9 | 31.2 |
| Tor | 1011.6 | +0.7 | 27.2 | —0.8 | 16.7 | +0.4 | 22.0 | 22.0 | —0.4 | 16.3 | —0.6 | 52 | — 2 | — | — | — | 9.1 |
| Hurghada | 1011.6 | +0.7 | 27.2 | +1.2 | 16.1 | 0.0 | 21.8 | 22.2 | 0.0 | 15.2 | —0.8 | 43 | — 6 | — | — | — | 19.8 |
| Quesir | 1011.6 | +1.5 | 26.1 | —1.2 | 19.7 | +0.3 | 22.9 | 23.2 | —0.6 | 16.4 | —0.5 | 46 | 0 | — | — | — | 18.4 |

— 3 —

Table A 2.— MAXIMUM AND MINIMUM AIR TEMPERATURES

APRIL — 1964

| Station | Maximum Temperature °C | | | | | | | | | Grass Min. Temp. | | Minimum Temperature °C | | | | | | | |
|-------------------------|------------------------|------|--------|----------|----------------------------|-----|-----|-----|-----|------------------|------------------|------------------------|------|--------|-------|-----------------------------|----|----|-----|
| | Highest | Date | Lowest | Date | No. of Days with Max-Temp. | | | | | Mean | Dev. From Normal | Highest | Date | Lowest | Date | No. of Days with Min. Temp. | | | |
| | | | | | >25 | >30 | >35 | >40 | >45 | | | | | | | < 10 | <5 | <0 | <-5 |
| Sallum | 35.4 | 4 | 18.5 | 11 | 6 | 2 | 1 | 0 | 0 | 14.0 | — | 19.8 | 4 | 12.3 | 20,21 | 0 | 0 | 0 | 0 |
| Mersa Matruh . . . (A) | 35.7 | 4 | 18.8 | 10 | 5 | 1 | 1 | 0 | 0 | — | — | 15.8 | 6 | 8.1 | 3 | 3 | 0 | 0 | 0 |
| Alexandria (A) | 35.4 | 4 | 19.7 | 10 | 7 | 2 | 1 | 0 | 0 | — | — | 16.2 | 28 | 8.8 | 23 | 4 | 0 | 0 | 0 |
| Port Said (A) | 29.4 | 6 | 19.6 | 21 | 1 | 0 | 0 | 0 | 0 | 14.5 | — | 17.9 | 5 | 9.1 | 20,21 | 2 | 0 | 0 | 0 |
| El Arish | 40.5 | 6 | 20.6 | 11,13,14 | 6 | 3 | 1 | 1 | 0 | 12.3 | — | 17.4 | 27 | 10.0 | 2 | 0 | 0 | 0 | 0 |
| Ghazza | 36.0 | 6 | 18.6 | 13 | 4 | 2 | 1 | 0 | 0 | 12.9 | — | 17.6 | 27 | 9.1 | 4 | 1 | 0 | 0 | 0 |
| Tanta | 34.8 | 6 | 21.6 | 20 | 16 | 4 | 0 | 0 | 0 | — | — | 14.4 | 5 | 8.0 | 1 | 8 | 0 | 0 | 0 |
| Cairo (A) | 36.2 | 4 | 22.3 | 16 | 22 | 7 | 4 | 0 | 0 | — | — | 19.4 | 6 | 10.1 | 20,21 | 0 | 0 | 0 | 0 |
| Fayoum | 40.1 | 6 | 23.5 | 21 | 26 | 10 | 3 | 1 | 0 | 9.5 | — | 18.3 | 5 | 10.3 | 11,19 | 0 | 0 | 0 | 0 |
| Minya (A) | 43.0 | 6 | 24.0 | 21 | 27 | 10 | 3 | 1 | 0 | 8.8 | — | 15.5 | 29 | 7.0 | 22 | 11 | 0 | 0 | 0 |
| Assyout (A) | 43.6 | 6 | 24.7 | 21 | 29 | 21 | 6 | 2 | 0 | 13.5 | — | 20.0 | 5 | 11.3 | 17,19 | 0 | 0 | 0 | 0 |
| Luxor (A) | 42.3 | 6 | 26.0 | 21 | 30 | 23 | 19 | 4 | 0 | — | — | 23.4 | 13 | 11.2 | 22 | 0 | 0 | 0 | 0 |
| Aswan (A) | 43.5 | 6 | 24.8 | 21 | 29 | 25 | 21 | 6 | 0 | — | — | 23.6 | 7 | 11.5 | 22 | 0 | 0 | 0 | 0 |
| Siwa | 39.5 | 4 | 23.8 | 20 | 28 | 11 | 1 | 0 | 0 | 12.8 | — | 19.2 | 6 | 9.2 | 17 | 4 | 0 | 0 | 0 |
| Bahariya | 40.3 | 6 | 23.4 | 16 | 26 | 12 | 2 | 1 | 0 | 12.5 | — | 21.8 | 6 | 7.9 | 22 | 4 | 0 | 0 | 0 |
| Farafra | 42.1 | 6 | 24.9 | 16 | 29 | 16 | 4 | 1 | 0 | 12.6 | — | 20.6 | 26 | 7.8 | 22 | 2 | 0 | 0 | 0 |
| Dakhla | 44.5 | 6 | 25.0 | 21 | 29 | 22 | 11 | 4 | 0 | 8.0 | — | 23.9 | 7 | 5.6 | 22 | 10 | 0 | 0 | 0 |
| Kharga | 43.4 | 6 | 25.4 | 21 | 30 | 23 | 12 | 3 | 0 | 14.9 | — | 25.3 | 7 | 8.5 | 22 | 2 | 0 | 0 | 0 |
| Tor | 32.8 | 4 | 23.0 | 21 | 21 | 7 | 0 | 0 | 0 | — | — | 21.2 | 7 | 11.0 | 22 | 0 | 0 | 0 | 0 |
| Hurghada | 31.0 | 7 | 23.6 | 17 | 24 | 2 | 0 | 0 | 0 | — | — | 21.9 | 7 | 11.3 | 22 | 0 | 0 | 0 | 0 |
| Quesir | 30.3 | 4,26 | 23.1 | 11 | 24 | 2 | 0 | 0 | 0 | — | — | 21.9 | 7,28 | 16.9 | 17 | 0 | 0 | 0 | 0 |

Table A 3.—SKY COVER AND RAINFALL

APRIL — 1964

| Station | Mean Sky Cover Oct | | | | | Rainfall mms | | | | | | | | | | |
|----------------------------|--------------------|------|------|------|-------|-----------------|---------------------|-------------------------|-------|------------------------------------|-------|-------|-------|------|------|------|
| | 00 | 06 | 12 | 18 | Daily | Total Amount | Dev. From Normal | Max. Fall in one day | | Number of Days With Amount of Rain | | | | | | |
| | U.T. | U.T. | U.T. | U.T. | Mean | | | Amount | Date | < 0.1 | ≥ 0.1 | ≥ 1.0 | ≥ 5.0 | ≥ 10 | ≥ 25 | ≥ 50 |
| | | | | | | | | | | | | | | | | |
| Sallum | 2.8 | 3.7 | 4.4 | 3.0 | 3.4 | 1.5 | + 0.9 | 1.0 | 19 | 0 | 2 | 1 | 0 | 0 | 0 | 0 |
| Mersa Matruh (A) | 1.9 | 4.4 | 4.2 | 2.4 | 3.3 | 8.4 | + 6.1 | 6.4 | 15 | 1 | 3 | 2 | 1 | 0 | 0 | 0 |
| Alexandria (A) | 2.7 | 3.9 | 4.2 | 2.9 | 3.6 | Tr. | — 2.7 | Tr. | 16.20 | 2 | 0 | 0 | 0 | 0 | 0 | 0 |
| Port Said (A) | 1.8 | 1.9 | 2.8 | 2.3 | 2.7 | 22.8 | +20.9 | 22.8 | 20 | 0 | 1 | 1 | 1 | 1 | 0 | 0 |
| El Arish | 4.5 | 4.6 | 4.1 | 4.2 | 3.3 | 42.3 | +38.0 | 42.3 | 20 | 0 | 1 | 1 | 1 | 1 | 1 | 0 |
| Ghazza | 4.5 | 4.4 | 3.8 | 3.5 | 4.2 | 5.0 | — 2.5 | 4.9 | 20 | 1 | 2 | 1 | 0 | 0 | 0 | 0 |
| Tanta | — | 1.5 | 3.2 | 1.1 | — | 13.7 | +11.8 | 13.4 | 20 | 0 | 2 | 1 | 1 | 1 | 0 | 0 |
| Cairo (A) | 2.1 | 3.6 | 4.1 | 2.3 | 3.1 | 0.5 | — 0.1 | 0.3 | 16 | 0 | 2 | 0 | 0 | 0 | 0 | 0 |
| Fayoum | — | 1.4 | 2.2 | 1.3 | — | Tr. | — 0.7 | Tr. | 20 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| Minya (A) | 1.0 | 2.0 | 2.7 | 2.1 | 2.2 | Tr. | — 0.5 | Tr. | 16 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| Assyout (A) | 0.6 | 1.6 | 2.2 | 1.2 | 1.2 | 0.0 | — Tr. | 0.0 | — | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Loxur (A) | 0.3 | 0.6 | 1.0 | 1.2 | 1.6 | 0.0 | — Tr. | 0.0 | — | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Aswan (A) | 0.7 | 0.8 | 0.6 | 0.5 | 0.6 | 0.0 | — 0.3 | 0.0 | — | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Siwa | 1.9 | 3.3 | 3.2 | 2.8 | 2.7 | Tr. | — 1.1 | Tr. | 29 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| Bahariya | 0.7 | 1.9 | 3.3 | 2.1 | 2.0 | 0.0 | — 0.6 | 0.0 | — | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Farafra | 0.7 | 2.2 | 2.2 | 1.5 | 1.5 | 0.0 | — 0.1 | 0.0 | — | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Dakhla | 0.3 | 1.0 | 1.4 | 0.1 | 0.9 | 0.0 | — Tr. | 0.0 | — | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Kharga | 0.6 | 0.6 | 1.3 | 0.7 | 0.8 | 0.0 | — Tr. | 0.0 | — | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Tor | 0.9 | 1.1 | 2.1 | 1.5 | 1.4 | Tr. | — 0.2 | Tr. | 15 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| Hurgada | 1.5 | 1.1 | 1.5 | 2.3 | 1.6 | 0.0 | — Tr. | 0.0 | — | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Quseir | 0.7 | 0.8 | 1.2 | 0.1 | 0.9 | 0.0 | — 0.1 | 0.0 | — | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

Table A 4.—DAYS OF OCCURRENCE OF MISCELLANEOUS WEATHER PHENOMENA.

APRIL — 1964

| Station | Precipitation | | | | Frost | Thunderstorm | Mist Vis 1000 metres Vis < 1000 metres | Fog Vis < 1000 Metres | Haze Vis ≥ 1000 Metres | Thick Haze Vis < 1000 Metres | Dust or Sandrising Vis ≥ 1000 Metres | Dust or Sandstorm Vis < 1000 Metres | Gale | Clear Sky | Cloudy Sky |
|----------------------------|---------------|------|-----------------|------|-------|--------------|---|--------------------------|---------------------------|---------------------------------|---|--|------|--------------|---------------|
| | Rain | Snow | Ice, Pellets | Hail | | | | | | | | | | | |
| Sallum | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 0 | 4 | 2 | 1 | 8 | 3 |
| Merse Matruh (A) | 3 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 5 | 2 | 0 | 8 | 1 |
| Alexandria (A) | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 6 | 0 | 1 | 2 | 1 | 0 | 5 | 0 |
| Port Said (A) | 2 | 1 | 0 | 0 | 0 | 2 | 1 | 0 | 0 | 0 | 4 | 1 | 1 | 14 | 0 |
| El Arish | 2 | 0 | 0 | 0 | 0 | 1 | 1 | 3 | 6 | 0 | 7 | 1 | 0 | 2 | 3 |
| Ghazza | 2 | 0 | 0 | 0 | 0 | 2 | 2 | 2 | 1 | 0 | 1 | 0 | 0 | 1 | 5 |
| Tanta | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | — | — |
| Cairo (A) | 2 | 0 | 0 | 0 | 0 | 0 | 4 | 3 | 10 | 0 | 7 | 4 | 0 | 9 | 1 |
| Fayoum | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | — | — |
| Minya (A) | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 0 | 10 | 0 | 4 | 1 | 0 | 16 | 1 |
| Assyout (A) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 12 | 0 | 7 | 1 | 1 | 21 | 0 |
| Luxor (A) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 16 | 2 | 5 | 0 | 0 | 24 | 0 |
| Aswan (A) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 0 | 14 | 4 | 0 | 28 | 0 |
| Siwa | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5 | 0 | 6 | 1 | 0 | 8 | 0 |
| Bahariya | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 4 | 0 | 0 | 15 | 1 |
| Farafra | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 0 | 6 | 0 | 0 | 21 | 0 |
| Dakhla | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 3 | 0 | 0 | 23 | 0 |
| Kharga | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 13 | 1 | 0 | 24 | 0 |
| Tor | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 0 | 12 | 1 | 0 | 20 | 0 |
| Hurghada | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 5 | 0 | 2 | 21 | 1 |
| Quesir | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 7 | 1 | 14 | 0 | 0 | 25 | 0 |

**TABLE A 5.—NUMBER IN HOURS OF OCCURRENCES OF CONCURRENT SURFACE
WIND SPEED AND DIRECTION RECORDED WITHIN SPECIFIED RANGES**

APRIL — 1964

| Station | calm (hours) | Variable (hours) | Unrecorded (hours) | Wind speed in knots | Number in hours of occurrences of wind blowing from the ranges of directions indicated | | | | | | | | | | | | | All directions |
|-------------------------|--------------|------------------|--------------------|------------------------|---|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-----|----------------|
| | | | | | 345 | 015 | 045 | 075 | 105 | 135 | 165 | 195 | 225 | 255 | 285 | 315 | | |
| | | | | | / 014 | / 044 | / 074 | / 104 | / 134 | / 164 | / 194 | / 224 | / 254 | / 284 | / 314 | / 344 | | |
| Mersa Matruh . . (A) | 9 | 2 | 0 | 1-10 | 49 | 35 | 18 | 16 | 33 | 23 | 0 | 1 | 4 | 39 | 54 | 42 | 314 | |
| | | | | 11-27 | 83 | 26 | 11 | 33 | 56 | 15 | 2 | 1 | 0 | 5 | 37 | 115 | 384 | |
| | | | | 28-47 | 1 | 0 | 0 | 0 | 0 | 2 | 6 | 1 | 0 | 1 | 1 | 0 | 11 | |
| | | | | ≥48 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| | | | | All speeds | 133 | 61 | 29 | 49 | 89 | 40 | 8 | 3 | 4 | 44 | 92 | 157 | 709 | |
| Alexandria. (A) | 26 | 0 | 0 | 1-10 | 67 | 53 | 55 | 24 | 42 | 21 | 7 | 2 | 0 | 23 | 130 | 116 | 540 | |
| | | | | 11-27 | 6 | 10 | 6 | 6 | 6 | 1 | 2 | 0 | 3 | 19 | 59 | 36 | 154 | |
| | | | | 28-47 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| | | | | ≥48 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| | | | | All speeds | 73 | 63 | 61 | 30 | 48 | 22 | 9 | 2 | 3 | 42 | 189 | 152 | 694 | |
| Port Said. (A) | 0 | 1 | 0 | 1-10 | 45 | 51 | 46 | 13 | 10 | 7 | 3 | 0 | 2 | 16 | 24 | 22 | 239 | |
| | | | | 11-27 | 95 | 31 | 66 | 36 | 7 | 1 | 5 | 1 | 1 | 54 | 61 | 115 | 473 | |
| | | | | 28-47 | 2 | 0 | 0 | 3 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 7 | |
| | | | | ≥48 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| | | | | All speeds | 142 | 82 | 112 | 52 | 18 | 8 | 8 | 1 | 3 | 70 | 85 | 138 | 719 | |
| El Arish | 5 | 10 | 0 | 1-10 | 62 | 42 | 38 | 16 | 30 | 63 | 23 | 28 | 71 | 39 | 109 | 59 | 580 | |
| | | | | 11-27 | 1 | 3 | 6 | 0 | 0 | 0 | 0 | 1 | 7 | 30 | 63 | 14 | 125 | |
| | | | | 28-47 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| | | | | ≥48 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| | | | | All speeds | 63 | 45 | 44 | 16 | 30 | 63 | 23 | 29 | 78 | 69 | 172 | 73 | 705 | |
| Ghazza. | 0 | 34 | 0 | 1-10 | 20 | 29 | 30 | 32 | 30 | 59 | 29 | 12 | 8 | 49 | 45 | 20 | 363 | |
| | | | | 11-27 | 30 | 25 | 5 | 1 | 1 | 24 | 3 | 10 | 28 | 119 | 51 | 26 | 323 | |
| | | | | 28-47 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| | | | | ≥48 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| | | | | All speeds | 50 | 54 | 35 | 33 | 31 | 83 | 32 | 22 | 36 | 168 | 96 | 46 | 686 | |
| Tanta | 44 | 10 | 0 | 1-10 | 23 | 55 | 81 | 39 | 20 | 9 | 6 | 10 | 73 | 74 | 115 | 116 | 621 | |
| | | | | 11-27 | 0 | 1 | 4 | 8 | 0 | 0 | 0 | 0 | 1 | 5 | 15 | 11 | 45 | |
| | | | | 28-47 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| | | | | ≥48 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| | | | | All speeds | 23 | 56 | 85 | 47 | 20 | 9 | 6 | 10 | 74 | 79 | 130 | 127 | 666 | |
| Cairo. (A) | 7 | 0 | 95 | 1-10 | 44 | 52 | 48 | 28 | 2 | 3 | 0 | 9 | 12 | 19 | 54 | 78 | 349 | |
| | | | | 11-27 | 26 | 27 | 46 | 38 | 14 | 0 | 7 | 10 | 9 | 7 | 35 | 48 | 267 | |
| | | | | 28-47 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 2 | |
| | | | | ≥48 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| | | | | All speeds | 70 | 79 | 94 | 66 | 16 | 3 | 7 | 21 | 21 | 26 | 89 | 126 | 618 | |
| Fayoum | 63 | 0 | 0 | 1-10 | 321 | 74 | 16 | 4 | 2 | 6 | 24 | 7 | 3 | 14 | 26 | 144 | 641 | |
| | | | | 11-27 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 2 | 1 | 1 | 6 | 16 | |
| | | | | 28-47 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| | | | | ≥48 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| | | | | All speeds | 326 | 74 | 16 | 4 | 2 | 6 | 24 | 8 | 5 | 15 | 27 | 150 | 657 | |

**TABLE A 5 (contd.)—NUMBER IN HOURS OF OCCURRENCES OF CONCURRENT SURFACE
WIND SPEED AND DIRECTION RECORDED WITHIN SPECIFIED RANGES**

APRIL — 1964

| Station | calm (hours) | variable (hours) | unrecorded (hours) | Wind speed in knots | Number in hours of occurrences of wind blowing from the range of direction indicated | | | | | | | | | | | | | All directions |
|---------------------|--------------|------------------|--------------------|------------------------|---|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|-----|----------------|
| | | | | | 345 / 014 | 015 / 044 | 045 / 074 | 075 / 104 | 105 / 134 | 135 / 164 | 165 / 194 | 195 / 224 | 225 / 254 | 255 / 284 | 285 / 314 | 315 / 344 | | |
| Minya (A) | 26 | 4 | 0 | 1-10 | 117 | 33 | 1 | 3 | 4 | 12 | 10 | 4 | 3 | 15 | 55 | 169 | 425 | |
| | | | | 11-27 | 52 | 50 | 0 | 0 | 0 | 0 | 7 | 1 | 6 | 20 | 10 | 119 | 265 | |
| | | | | 28-47 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| | | | | ≥ 48 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| | | | | All speeds | 169 | 83 | 1 | 3 | 4 | 12 | 17 | 5 | 9 | 35 | 65 | 287 | 690 | |
| Assiout | 3 | 0 | 0 | 1-10 | 13 | 19 | 10 | 8 | 11 | 15 | 5 | 7 | 39 | 129 | 123 | 126 | 505 | |
| | | | | 11-27 | 4 | 2 | 0 | 0 | 2 | 5 | 7 | 11 | 2 | 5 | 44 | 121 | 208 | |
| | | | | 28-47 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 4 | 0 | 0 | 6 | |
| | | | | ≥ 48 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| | | | | All speeds | 17 | 21 | 10 | 8 | 13 | 20 | 12 | 23 | 41 | 138 | 167 | 247 | 717 | |
| Luxor (A) | 17 | 0 | 7 | 1-10 | 42 | 70 | 34 | 30 | 24 | 29 | 52 | 43 | 19 | 25 | 31 | 191 | 590 | |
| | | | | 11-27 | 1 | 3 | 0 | 0 | 1 | 2 | 0 | 4 | 2 | 3 | 12 | 78 | 106 | |
| | | | | 28-47 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| | | | | ≥ 48 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| | | | | All speeds | 43 | 73 | 34 | 30 | 25 | 31 | 52 | 47 | 21 | 28 | 43 | 269 | 696 | |
| Aswan (A) | 0 | 0 | 0 | 1-10 | 141 | 118 | 13 | 12 | 13 | 10 | 17 | 5 | 8 | 3 | 22 | 59 | 421 | |
| | | | | 11-27 | 140 | 92 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 4 | 7 | 53 | 299 | |
| | | | | 28-47 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| | | | | ≥ 48 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| | | | | All speeds | 281 | 210 | 13 | 12 | 13 | 10 | 18 | 6 | 9 | 7 | 29 | 112 | 720 | |
| Siwa | 20 | 0 | 3 | 1-10 | 47 | 51 | 83 | 98 | 55 | 17 | 8 | 6 | 10 | 18 | 30 | 29 | 452 | |
| | | | | 11-27 | 16 | 32 | 28 | 22 | 50 | 18 | 3 | 3 | 0 | 5 | 27 | 39 | 243 | |
| | | | | 28-47 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 2 | |
| | | | | ≥ 48 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| | | | | All speeds | 63 | 83 | 111 | 120 | 105 | 35 | 11 | 10 | 10 | 23 | 57 | 69 | 697 | |
| Dahliya | 12 | 8 | 0 | 1-10 | 55 | 117 | 91 | 64 | 41 | 31 | 24 | 41 | 26 | 24 | 48 | 103 | 665 | |
| | | | | 11-27 | 6 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 2 | 6 | 11 | 35 | |
| | | | | 28-47 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| | | | | ≥ 48 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| | | | | All speeds | 61 | 126 | 91 | 64 | 41 | 31 | 24 | 41 | 27 | 26 | 54 | 114 | 700 | |
| Hurghada | 2 | 4 | 4 | 1-10 | 11 | 9 | 8 | 12 | 37 | 12 | 0 | 0 | 2 | 27 | 69 | 20 | 207 | |
| | | | | 11-27 | 35 | 9 | 2 | 1 | 10 | 8 | 0 | 0 | 0 | 32 | 165 | 178 | 440 | |
| | | | | 28-47 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5 | 58 | 63 | |
| | | | | ≥ 48 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| | | | | All speeds | 46 | 18 | 10 | 13 | 47 | 20 | 0 | 0 | 2 | 59 | 239 | 256 | 710 | |
| Quseir | 0 | 0 | 1 | 1-10 | 43 | 21 | 10 | 8 | 24 | 34 | 9 | 6 | 11 | 36 | 81 | 76 | 359 | |
| | | | | 11-27 | 114 | 4 | 3 | 0 | 7 | 3 | 0 | 0 | 0 | 6 | 41 | 182 | 360 | |
| | | | | 28-47 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| | | | | ≥ 48 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| | | | | All speeds | 157 | 25 | 13 | 8 | 31 | 37 | 9 | 6 | 11 | 42 | 122 | 256 | 719 | |

Table B 1.—UPPER AIR CLIMATOLOGICAL DATA

APRIL—1964

| Station | Pressure Surface (Millibar) | Altitude of Pressure Surface (gpm) | | | | Temperature (°C) | | | | Dew Point (°C) | |
|----------------------|-----------------------------|------------------------------------|---------------|---------------|---------------|------------------|-------|---------|--------|----------------|-------|
| | | N | Mean | Highest | Lowest | N | Mean | Highest | Lowest | N | Mean |
| Mersa Matruh 0000 UT | Surface . . . | 30 | * 1011m.b. | * 1018m.b. | * 1003m.b. | 30 | 15.1 | 17.3 | 12.7 | 30 | 11.8 |
| | 1000 . . . | 30 | 134 | 196 | 70 | 30 | 15.0 | 18.0 | 12.8 | 30 | 10.9 |
| | 850 . . . | 30 | 1504 | 1555 | 1450 | 30 | 11.5 | 20.7 | 3.5 | 19 | -4.4 |
| | 700 . . . | 30 | 3102 | 3166 | 3019 | 30 | 2.9 | 10.8 | -6.5 | 16 | -8.6 |
| | 600 . . . | 30 | 4331 | 4400 | 4219 | 30 | -5.6 | 1.0 | -11.2 | 14 | -14.3 |
| | 500 . . . | 30 | 5736 | 5825 | 5591 | 30 | -15.3 | -7.5 | -23.4 | 13 | -21.1 |
| | 400 . . . | 29 | 7385 | 7515 | 7225 | 29 | -26.7 | -14.5 | -33.5 | 11 | -30.2 |
| | 300 . . . | 29 | 9399 | 9588 | 9202 | 29 | -40.5 | -22.7 | -47.5 | 2 | -41.4 |
| | 200 . . . | 29 | 11987 | 12306 | 11859 | 29 | -55.0 | -47.4 | -62.1 | — | — |
| | 150 . . . | 28 | 13856 | 14048 | 13704 | 28 | -63.6 | -55.0 | -68.9 | — | — |
| | 100 . . . | 21 | 16321 | 16482 | 16223 | 21 | -66.2 | -60.6 | -75.0 | — | — |
| | 70 . . . | 12 | 18468 | 18530 | 18400 | 12 | -65.6 | -59.4 | -71.4 | — | — |
| | 50 . . . | 6 | 20539 | 20604 | 20428 | 6 | -58.8 | -56.0 | -66.6 | — | — |
| | 30 . . . | 2 | 23672 | 23765 | 23578 | 2 | -55.6 | -53.9 | -57.4 | — | — |
| | 20 . . . | — | — | — | — | — | — | — | — | — | — |
| | 10 . . . | — | — | — | — | — | — | — | — | — | — |
| Helwan 0000 UT | Surface . . . | 30 | * 997m.b. | * 1004m.b. | * 988m.b. | 30 | 16.0 | 29.0 | 11.2 | 30 | 6.1 |
| | 1000 . . . | 30 | 118 | 174 | 44 | 10 | 14.4 | 15.8 | 13.1 | 10 | 9.0 |
| | 850 . . . | 30 | 1492 | 1532 | 1435 | 30 | 13.0 | 27.2 | 4.0 | 15 | -6.9 |
| | 700 . . . | 30 | 3098 | 3159 | 2990 | 30 | 4.6 | 12.9 | -8.3 | 12 | -9.4 |
| | 600 . . . | 30 | 4335 | 4424 | 4170 | 30 | -4.2 | 3.2 | -17.0 | 15 | -12.8 |
| | 500 . . . | 30 | 5747 | 5870 | 5518 | 30 | -13.8 | -6.0 | -26.0 | 15 | -20.6 |
| | 400 . . . | 30 | 7403 | 7573 | 7110 | 30 | -25.6 | -20.0 | -34.6 | 10 | -30.8 |
| | 300 . . . | 30 | 9430 | 9636 | 9120 | 30 | -39.8 | -35.3 | -46.2 | 4 | -40.3 |
| | 200 . . . | 30 | 12102 | 12308 | 11859 | 29 | -54.1 | -45.2 | -61.1 | — | — |
| | 150 . . . | 29 | 13918 | 14099 | 13691 | 29 | -61.9 | -54.8 | -70.3 | — | — |
| | 100 . . . | 28 | 16375 | 16529 | 16200 | 28 | -68.8 | -61.3 | -77.5 | — | — |
| | 70 . . . | 25 | 18506 | 18600 | 18340 | 25 | -68.1 | -58.6 | -77.5 | — | — |
| | 50 . . . | 19 | 20550 | 20676 | 20387 | 19 | -62.7 | -58.0 | -69.8 | — | — |
| | 30 . . . | 13 | 23775 | 23921 | 23604 | 13 | -54.4 | -49.1 | -60.3 | — | — |
| | 20 . . . | 11 | 26410 | 26586 | 26173 | 11 | -49.3 | -47.0 | -54.7 | — | — |
| | 10 . . . | 3 | 30897 | 30960 | 30960 | 3 | -40.9 | -34.5 | -44.6 | — | — |
| Aswan 0000 UT | Surface . . . | 30 | * 988m.b. | * 994m.b. | * 982m.b. | 30 | 21.4 | 28.8 | 15.0 | 30 | -1.8 |
| | 1000 . . . | — | — | — | — | — | — | — | — | — | — |
| | 850 . . . | 30 | 1491 | 1535 | 1454 | 30 | 18.0 | 26.4 | 6.1 | 15 | -3.6 |
| | 700 . . . | 30 | 3121 | 3196 | 3030 | 30 | 7.8 | 13.6 | -0.3 | 10 | -9.3 |
| | 600 . . . | 36 | 4371 | 4466 | 4249 | 30 | -1.1 | 2.6 | -6.7 | 6 | -14.0 |
| | 500 . . . | 30 | 5800 | 5926 | 5661 | 30 | -10.3 | -5.5 | -15.9 | 1 | -33.4 |
| | 400 . . . | 30 | 7480 | 7634 | 7335 | 30 | -23.0 | -17.6 | -28.7 | 1 | -23.2 |
| | 300 . . . | 30 | 9529 | 9706 | 9339 | 30 | -36.5 | -26.4 | -42.8 | 2 | -45.0 |
| | 200 . . . | 30 | 12234 | 12435 | 12029 | 30 | -54.4 | -51.0 | -57.2 | — | — |
| | 150 . . . | 24 | 14049 | 14255 | 13819 | 24 | -66.2 | -63.3 | -70.3 | — | — |
| | 100 . . . | 20 | 16450 | 16702 | 16230 | 20 | -77.9 | -73.4 | -85.2 | — | — |
| | 70 . . . | 11 | 18552 | 18760 | 18380 | 11 | -75.3 | -66.2 | -80.5 | — | — |
| | 50 . . . | 8 | 20553 | 20724 | 20352 | 8 | -63.5 | -59.5 | -67.7 | — | — |
| | 30 . . . | — | — | — | — | — | — | — | — | — | — |
| | 20 . . . | — | — | — | — | — | — | — | — | — | — |
| | 10 . . . | — | — | — | — | — | — | — | — | — | — |

N = Number of cases the element has been observed during the month.

* The atmospheric pressure corrected to the elevation of the radiosonde station.

Table B 1 (contd.)—UPPER AIR CLIMATOLOGICAL DATA

APRIL — 1964

| Station | Pressure Surface (Millibar) | Altitude of Pressure Surface (gpm) | | | | Temperature (°C) | | | | Dew Point | |
|----------------------|-----------------------------|------------------------------------|----------|----------|----------|------------------|-------|---------|--------|-----------|-----|
| | | N | Mean | Highest | Lowest | N | Mean | Highest | Lowest | N | Mo |
| Marsa Matruh 1200 UT | Surface . . . | 30 | * | * | * | 30 | 19.5 | 25.6 | 16.0 | 30 | 11 |
| | 1000 . . . | 30 | 1011m.b. | 1017m.b. | 1000m.b. | 30 | 18.4 | 25.1 | 14.1 | 30 | 10 |
| | 850 . . . | 30 | 136 | 195 | 45 | 30 | 11.8 | 21.0 | 3.8 | 16 | — |
| | 700 . . . | 30 | 1511 | 1550 | 1426 | 30 | 3.3 | 12.0 | — 6.2 | 13 | — |
| | 600 . . . | 30 | 3110 | 3154 | 3010 | 30 | — 4.7 | 2.0 | —13.2 | 10 | —14 |
| | 500 . . . | 30 | 4342 | 4408 | 4203 | 30 | —14.8 | — 7.5 | —25.0 | 12 | —22 |
| | 400 . . . | 30 | 5749 | 5832 | 5563 | 30 | —26.1 | —20.9 | —32.2 | 9 | —30 |
| | 300 . . . | 30 | 7405 | 7522 | 7307 | 30 | —40.8 | —35.4 | —48.8 | 3 | —45 |
| | 200 . . . | 30 | 9224 | 9586 | 9196 | 30 | —54.3 | —46.3 | —62.0 | — | — |
| | 150 . . . | 29 | 12095 | 12289 | 11871 | 30 | —60.7 | —54.3 | —68.6 | — | — |
| | 100 . . . | 28 | 13907 | 14130 | 13717 | 28 | —66.9 | —58.9 | —74.8 | — | — |
| | 70 . . . | 12 | 16400 | 16587 | 16258 | 12 | —62.4 | —58.9 | —70.6 | — | — |
| | 50 . . . | 9 | 18559 | 18670 | 18450 | 9 | —55.8 | —51.3 | —58.4 | — | — |
| | 30 . . . | 2 | 20674 | 20782 | 20586 | 2 | —48.4 | —47.0 | —49.7 | — | — |
| | 20 . . . | — | 24027 | 24088 | 23966 | — | — | — | — | — | — |
| | 10 . . . | — | — | — | — | — | — | — | — | — | — |
| Helwan 1200 UT | Surface . . . | 30 | * | * | * | 30 | 25.6 | 33.8 | 13.9 | 30 | 3 |
| | 1000 . . . | 30 | 997m.b. | 1004m.b. | 984m.b. | 9 | 24.4 | 29.0 | 21.8 | 9 | 5 |
| | 850 . . . | 30 | 111 | 175 | 24 | 30 | 13.1 | 21.6 | 2.8 | 20 | — 9 |
| | 700 . . . | 30 | 1503 | 1543 | 1425 | 30 | 4.2 | 12.4 | — 4.8 | 13 | — 9 |
| | 600 . . . | 30 | 3109 | 3172 | 2980 | 30 | — 3.0 | 3.0 | —14.7 | 14 | —12 |
| | 500 . . . | 30 | 4345 | 4442 | 4172 | 30 | —13.4 | — 7.6 | —24.6 | 13 | —21 |
| | 400 . . . | 30 | 5759 | 5882 | 5526 | 30 | —25.5 | —18.3 | —32.8 | 12 | —28 |
| | 300 . . . | 30 | 7416 | 7582 | 7141 | 30 | —39.1 | —30.3 | —45.8 | 3 | —41 |
| | 200 . . . | 29 | 9444 | 9576 | 9153 | 29 | —54.2 | —46.5 | —62.1 | — | — |
| | 150 . . . | 27 | 12124 | 12284 | 11839 | 27 | —61.2 | —54.5 | —69.8 | — | — |
| | 100 . . . | 27 | 13933 | 14162 | 13701 | 27 | —68.0 | —61.0 | —77.4 | — | — |
| | 70 . . . | 25 | 16403 | 16594 | 16224 | 25 | —67.1 | —61.4 | —76.7 | — | — |
| | 50 . . . | 22 | 18537 | 18630 | 18400 | 22 | —59.9 | —52.7 | —72.7 | — | — |
| | 30 . . . | 13 | 20602 | 20736 | 20460 | 13 | —51.6 | —47.9 | —55.0 | — | — |
| | 20 . . . | 6 | 23843 | 24024 | 23618 | 6 | —44.1 | —38.3 | —48.3 | — | — |
| | 10 . . . | — | 26523 | 26677 | 26307 | — | — | — | — | — | — |
| Aswan 1200 UT | Surface . . . | 30 | * | * | * | 30 | 35.3 | 42.1 | 24.8 | 3 | 0 |
| | 1000 . . . | — | 987m.b. | 991m.b. | 983m.b. | — | — | — | — | — | — |
| | 850 . . . | 30 | — | — | — | 30 | 21.2 | 27.4 | 11.2 | 7 | — 5 |
| | 700 . . . | 30 | 1511 | 1587 | 1466 | 30 | 9.6 | 15.8 | 3.8 | 7 | —12 |
| | 600 . . . | 30 | 3151 | 3212 | 3067 | 30 | 0.7 | 5.8 | — 3.6 | 7 | —16 |
| | 500 . . . | 30 | 4408 | 4516 | 4319 | 30 | — 8.8 | — 2.8 | —14.0 | — | — |
| | 400 . . . | 30 | 5846 | 5975 | 5745 | 30 | —21.1 | —18.1 | —25.3 | — | — |
| | 300 . . . | 29 | 7538 | 7704 | 7416 | 29 | —34.5 | —23.7 | —40.4 | — | — |
| | 200 . . . | 27 | 9597 | 9818 | 9426 | 27 | —52.0 | —36.3 | —55.5 | — | — |
| | 150 . . . | 25 | 12326 | 12592 | 12109 | 25 | —64.2 | —45.0 | —68.8 | — | — |
| | 100 . . . | 20 | 14148 | 14420 | 13907 | 20 | —75.2 | —70.9 | —84.8 | — | — |
| | 70 . . . | 5 | 16542 | 16854 | 16271 | 5 | —72.8 | —72.1 | —74.2 | — | — |
| | 50 . . . | 2 | 18708 | 18880 | 18610 | 2 | —72.4 | —71.1 | —73.7 | — | — |
| | 30 . . . | — | 20618 | 20672 | 20564 | — | — | — | — | — | — |
| | 20 . . . | — | — | — | — | — | — | — | — | — | — |
| | 10 . . . | — | — | — | — | — | — | — | — | — | — |

N — Number of cases the element has been observed during the month.

* The atmospheric pressure corrected to the elevation of the radiosonde station.

**Table B 2.—MEAN AND EXTREME VALUES OF THE FREEZING LEVEL AND THE TROPOPAUSE;
THE HIGHEST WIND SPEED IN THE UPPER AIR**

APRIL — 1964

| Station | | Freezing Level | | | | | | | | | First Tropopause | | | | | | | | | Highest wind speed | | | | |
|---------|------------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|------------------|----------------|------------------|----------------|----------------|------------------|----------------|----------------|------------------|--------------------|----------------|----------------------|----------------|--|
| | | Mean | | | Highest | | | Lowest | | | Mean | | | Highest | | | Lowest | | | Altitude (gpm) | Pressure (mb.) | Direction (000—360)° | Speed in Knots | |
| | | Altitude (gpm) | Pressure (mb.) | Dew point (°C) | Altitude (gpm) | Pressure (mb.) | Dew point (°C) | Altitude (gpm) | Pressure (mb.) | Dew point (°C) | Altitude (gpm) | Pressure (mb.) | Temperature (°C) | Altitude (gpm) | Pressure (mb.) | Temperature (°C) | Altitude (gpm) | Pressure (mb.) | Temperature (°C) | | | | | |
| 0000 UT | Mersa Matruh(A) | (N) | (N) | (N) | | | | | | | (N) | (N) | (N) | | | | | | | | | | | |
| | Helwan | 3476 (30) | 654 (30) | — 8.5 (16) | 4500 | 590 | —10.6 | 2230 | 778 | — 3.0 | 11973 (19) | 207 (19) | —60.5 (19) | 14840 | 130 | —73.0 | 9570 | 288 | —48.0 | 6400 | 464 | 240 | 160 | |
| | Aswan . . . (A) | 3732 (30) | 648 (30) | — 9.7 (15) | 5100 | 551 | — | 1820 | 813 | — 6.8 | 12723 (26) | 189 (26) | —58.6 (26) | 16130 | 106 | —74.6 | 9490 | 293 | —43.1 | 11550 | 217 | 290 | 150 | |
| 1200 UT | Aswan . . . (A) | 4207 (30) | 591 (30) | —14.1 (8) | 5280 | 543 | — | 2970 | 705 | — | 15055 (13) | 102 (13) | —77.0 (13) | 18400 | 73 | —81.8 | 14200 | 144 | —67.4 | 11360 | — | 290 | 120 | |
| | MersaMatruh (A) | (N) | (N) | (N) | | | | | | | (N) | (N) | (N) | | | | | | | | | | | |
| | Helwan | 3549 (30) | 661 (30) | — 9.8 (12) | 4630 | 578 | — | 2070 | 688 | — 0.8 | 12465 (22) | 192 (22) | —61.9 (22) | 16010 | 106 | —66.4 | 10600 | 247 | —49.5 | 4600 | 575 | 270 | 150 | |
| | Helwan | 3664 (30) | 656 (30) | — 9.7 (16) | 4725 | 575 | — | 1980 | 792 | — 1.2 | 14295 (25) | 231 (25) | —64.0 (25) | 17950 | 78 | —78.2 | 9660 | 278 | —55.6 | 8800 | 330 | 290 | 150 | |
| | Aswan . . . (A) | 4498 (30) | 594 (30) | —17.6 (5) | 5260 | 544 | — | 4000 | 629 | — | 14439 (11) | 125 (11) | —71.2 (11) | 18810 | 68 | —79.7 | 10520 | 260 | —38.0 | 19700 | — | 230 | 107 | |

N — The number of cases the element has been observed during the month.

Table B 3.—NUMBER OF OCCURRENCES OF WIND DIRECTION WITHIN SPECIFIED RANGES AND THE MEAN SCALAR WIND SPEED AT THE STANDARD AND SELECTED PRESSURE SURFACES

MERSA MATRUH (A)— APRIL 1964

| Time | Pressure Surface Millibar | Wind between specified ranges of direction (000—360)° | | | | | | | | | | | | | | | | | | | | | | | | Number of calm winds | Total number of observations (TN) | Mean scalar wind speed (knots) |
|------------|------------------------------|---|-----------|-----------------|-----------|-----------------|-----------|-----------------|-----------|-----------------|-----------|-----------------|-----------|-----------------|-----------|-----------------|-----------|-----------------|-----------|-----------------|-----------|-----------------|-----------|-----------------|-----------|-------------------------|--------------------------------------|-----------------------------------|
| | | 345 / 014 | | 015 / 044 | | 045 / 074 | | 075 / 104 | | 105 / 134 | | 135 / 164 | | 165 / 194 | | 195 / 224 | | 225 / 254 | | 255 / 284 | | 285 / 314 | | 315 / 344 | | | | |
| | | N | (ff) m | N | (ff) m | N | (ff) m | N | (ff) m | N | (ff) m | N | (ff) m | N | (ff) m | N | (ff) m | N | (ff) m | N | (ff) m | N | (ff) m | N | (ff) m | | | |
| 0000 U.T. | Surface | 4 | 10 | 1 | 8 | 0 | — | 0 | — | 6 | 13 | 2 | 10 | 1 | 13 | 0 | — | 0 | — | 7 | 7 | 6 | 10 | 1 | 15 | 2 | 30 | 9 |
| | 1000 | 3 | 11 | 1 | 8 | 0 | — | 0 | — | 6 | 13 | 2 | 10 | 1 | 13 | 0 | — | 1 | 10 | 5 | 7 | 7 | 10 | 2 | 14 | 2 | 30 | 10 |
| | 850 | 2 | 17 | 1 | 30 | 0 | — | 1 | 4 | 0 | — | 1 | 11 | 3 | 17 | 1 | 8 | 1 | 17 | 5 | 15 | 7 | 26 | 8 | 10 | 0 | 30 | 20 |
| | 700 | 3 | 26 | 1 | 3 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 2 | 26 | 2 | 42 | 9 | 39 | 11 | 36 | 2 | 20 | 0 | 30 | 34 |
| | 600 | 1 | 77 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 3 | 57 | 3 | 50 | 10 | 56 | 9 | 43 | 4 | 29 | 0 | 30 | 49 |
| | 500 | 1 | 89 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 3 | 62 | 6 | 45 | 7 | 53 | 4 | 44 | 0 | 21 | 52 |
| | 400 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 6 | 59 | 7 | 61 | 2 | 47 | 0 | 15 | 58 |
| | 300 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 3 | 32 | 6 | 73 | 2 | 54 | 0 | 11 | 64 |
| | 200 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 3 | 58 | 4 | 96 | 0 | — | 0 | 7 | 79 |
| | 150 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 2 | 68 | 2 | 74 | 0 | — | 0 | 4 | 71 |
| | 100 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 2 | 57 | 0 | — | 0 | — | 0 | 2 | 57 |
| | 70 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| | 60 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| | 50 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| 40 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | |
| 30 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | |
| 20 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | |
| 10 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | |
| 1200 U.T. | Surface | 4 | 15 | 4 | 12 | 4 | 17 | 3 | 16 | 1 | 18 | 0 | — | 0 | — | 0 | — | 1 | 5 | 0 | — | 1 | 26 | 12 | 16 | 0 | 30 | 16 |
| | 1000 | 5 | 14 | 4 | 10 | 4 | 17 | 2 | 16 | 2 | 13 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 1 | 26 | 12 | 16 | 0 | 30 | 15 |
| | 850 | 1 | 28 | 1 | 12 | 0 | — | 0 | — | 1 | 7 | 2 | 20 | 1 | 10 | 1 | 35 | 1 | 50 | 5 | 17 | 13 | 24 | 4 | 18 | 0 | 30 | 22 |
| | 700 | 2 | 24 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 2 | 14 | 0 | — | 2 | 62 | 8 | 42 | 12 | 31 | 4 | 25 | 0 | 30 | 33 |
| | 600 | 1 | 50 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 1 | 22 | 4 | 66 | 10 | 58 | 9 | 45 | 4 | 34 | 1 | 30 | 48 |
| | 500 | 1 | 65 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 3 | 69 | 11 | 68 | 5 | 45 | 4 | 38 | 1 | 25 | 56 |
| | 400 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 7 | 48 | 5 | 56 | 2 | 69 | 0 | 14 | 54 |
| | 300 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 6 | 47 | 4 | 64 | 1 | 53 | 0 | 11 | 54 |
| | 200 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 6 | 69 | 0 | — | 1 | 96 | 0 | 7 | 73 |
| | 150 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 3 | 60 | 0 | — | 0 | — | 0 | 3 | 60 |
| | 100 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| | 70 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| | 60 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| | 50 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| 40 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | |
| 30 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | |
| 20 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | |
| 10 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | |

N = The number of cases the wind has been observed from the range of direction during the month.

TN = The total number of cases the wind has been observed for all directions during the month.

TABLE B 3 (contd.).—NUMBER OF OCCURRENCES OF WIND DIRECTION WITHIN SPECIFIED RANGES AND THE MEAN SCALAR WIND SPEED AT THE STANDARD AND SELECTED PRESSURE SURFACES

HELWAN—APRIL 1964

| Time | Pressure Surface Millibar | Wind between specified ranges of direction (000—360)° | | | | | | | | | | | | | | | | | | | | | | | | Number of calm winds | Total number of observations (TN) | Mean scalar wind speed (knots) |
|--------------|------------------------------|---|-----------|--------------|-----------|--------------|-----------|--------------|-----------|--------------|-----------|--------------|-----------|--------------|-----------|--------------|-----------|--------------|-----------|--------------|-----------|--------------|-----------|--------------|-----------|-------------------------|--------------------------------------|-----------------------------------|
| | | 345 / 014 | | 015 / 044 | | 045 / 074 | | 075 / 104 | | 105 / 134 | | 135 / 164 | | 165 / 194 | | 195 / 224 | | 225 / 254 | | 255 / 284 | | 285 / 314 | | 315 / 344 | | | | |
| | | N | (ff) m | N | (ff) m | N | (ff) m | N | (ff) m | N | (ff) m | N | (ff) m | N | (ff) m | N | (ff) m | N | (ff) m | N | (ff) m | N | (ff) m | N | (ff) m | | | |
| 0000 U.T. | Surface | 7 | 7 | 6 | 6 | 5 | 16 | 2 | 12 | 1 | 5 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 3 | 9 | 6 | 30 | 7 |
| | 1000 | 6 | 8 | 2 | 6 | 1 | 20 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 1 | 6 | 0 | 10 | 9 |
| | 850 | 2 | 18 | 5 | 9 | 0 | — | 1 | 17 | 0 | — | 1 | 11 | 0 | — | 1 | 23 | 4 | 18 | 0 | — | 11 | 18 | 5 | 16 | 0 | 30 | 16 |
| | 700 | 3 | 24 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 1 | 14 | 5 | 30 | 8 | 36 | 8 | 36 | 5 | 23 | 0 | 30 | 31 |
| | 700 | 1 | 5 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 3 | 34 | 12 | 45 | 10 | 39 | 4 | 26 | 0 | 30 | 38 |
| | 500 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 1 | 81 | 15 | 45 | 11 | 55 | 2 | 23 | 0 | 29 | 45 |
| | 400 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 10 | 59 | 13 | 52 | 2 | 12 | 0 | 25 | 52 |
| | 300 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 2 | 83 | 6 | 74 | 11 | 64 | 2 | 49 | 0 | 21 | 67 |
| | 200 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 5 | 65 | 4 | 86 | 2 | 90 | 0 | 11 | 77 |
| | 150 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 5 | 82 | 3 | 91 | 0 | — | 0 | 8 | 85 |
| | 100 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 1 | 77 | 1 | 58 | 0 | — | 0 | — | 0 | 2 | 68 |
| | 70 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| | 60 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| | 50 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| | 40 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| 30 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | |
| 20 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | |
| 10 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | |
| 1200 U.T. | Surface | 1 | 12 | 6 | 12 | 1 | 15 | 0 | — | 0 | — | 0 | — | 1 | 12 | 1 | 4 | 3 | 9 | 3 | 11 | 8 | 12 | 5 | 11 | 1 | 30 | 11 |
| | 1000 | 0 | — | 1 | 8 | 1 | 15 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 1 | 14 | 1 | 12 | 4 | 10 | 1 | 9 | 10 |
| | 850 | 3 | 12 | 5 | 10 | 1 | 12 | 0 | — | 0 | — | 1 | 9 | 1 | 6 | 0 | 24 | 2 | 28 | 3 | 22 | 5 | 21 | 8 | 12 | 0 | 30 | 15 |
| | 700 | 3 | 13 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 5 | 24 | 8 | 31 | 6 | 34 | 8 | 30 | 0 | 30 | 28 |
| | 600 | 1 | 44 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 3 | 37 | 12 | 35 | 9 | 40 | 4 | 26 | 0 | 29 | 36 |
| | 500 | 1 | 3 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 2 | 72 | 10 | 44 | 14 | 39 | 1 | 39 | 0 | 28 | 44 |
| | 400 | 1 | 18 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 2 | 52 | 12 | 66 | 9 | 56 | 0 | — | 0 | 24 | 59 |
| | 300 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 1 | 93 | 0 | — | 8 | 74 | 5 | 46 | 2 | 67 | 0 | 16 | 65 |
| | 200 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 1 | 57 | 5 | 72 | 1 | 69 | 1 | 129 | 0 | 8 | 77 |
| | 150 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 5 | 66 | 1 | 70 | 1 | 125 | 0 | 7 | 75 |
| | 100 | — | — | — | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| | 70 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| | 60 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| | 50 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| | 40 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| 30 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | |
| 20 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | |
| 10 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | |

N = The number of cases the wind has been observed from the range of direction during the month.

TN = The total number of cases the wind has been observed for all directions during the month.

Table B 3 (contd.)—NUMBER OF OCCURRENCES OF WIND DIRECTION WITHIN SPECIFIED RANGES AND THE MEAN SCALAR WIND SPEED AT THE STANDARD AND SELECTED PRESSURE SURFACES.

ASWAN (A) — APRIL 1964

| Time | Pressure Surface Millibar | Wind between specified ranges of direction (000—360)* | | | | | | | | | | | | | | | | Number of calm winds | Total number of observations (TN) | Mean scalar wind speed (knots) | | | | | | | | |
|------------|------------------------------|---|-----------|-----------------|-----------|-----------------|-----------|-----------------|-----------|-----------------|-----------|-----------------|-----------|-----------------|-----------|-----------------|-----------|-------------------------|--------------------------------------|-----------------------------------|-----------------|-----------|-----------------|-----------|-----------------|-----------|-----------------|-----------|
| | | 345 / 014 | | 015 / 044 | | 045 / 074 | | 075 / 104 | | 105 / 134 | | 135 / 164 | | 165 / 194 | | 195 / 224 | | | | | 225 / 254 | | 255 / 284 | | 285 / 314 | | 315 / 344 | |
| | | N | (ff) m | N | (ff) m | N | (ff) m | N | (ff) m | N | (ff) m | N | (ff) m | N | (ff) m | N | (ff) m | | | | N | (ff) m | N | (ff) m | N | (ff) m | N | (ff) m |
| 0000 U.T. | Surface | 17 | 15 | 2 | 12 | 2 | 7 | 2 | 6 | 1 | 7 | 1 | 12 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 3 | 15 | 2 | 30 | 12 |
| | 1000 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | |
| | 850 | 6 | 11 | 9 | 10 | 4 | 12 | 3 | 7 | 1 | 3 | 1 | 32 | 0 | — | 0 | — | 0 | — | 0 | — | 3 | 13 | 3 | 19 | 0 | 30 | 12 |
| | 700 | 0 | — | 1 | 7 | 1 | 10 | 4 | 20 | 2 | 6 | 0 | — | 2 | 6 | 0 | — | 4 | 13 | 3 | 19 | 10 | 16 | 3 | 19 | 0 | 30 | 15 |
| | 600 | 0 | — | 1 | 18 | 2 | 46 | 2 | 6 | 0 | — | 0 | — | 1 | 2 | 1 | 3 | 5 | 26 | 4 | 22 | 10 | 18 | 4 | 20 | 0 | 30 | 20 |
| | 500 | 0 | — | 2 | 52 | 1 | 110 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 4 | 32 | 13 | 31 | 7 | 20 | 3 | 13 | 0 | 30 | 31 |
| | 400 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 1 | 16 | 5 | 35 | 13 | 38 | 6 | 36 | 3 | 19 | 0 | 28 | 34 |
| | 300 | 0 | — | 1 | 24 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 3 | 31 | 12 | 61 | 6 | 43 | 3 | 32 | 0 | 25 | 48 |
| | 200 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 2 | 89 | 5 | 62 | 5 | 42 | 4 | 66 | 0 | 16 | 60 |
| | 150 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 5 | 29 | 1 | 55 | 1 | 70 | 0 | 7 | 60 |
| | 100 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| | 70 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| | 60 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| | 50 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| | 40 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| 30 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | |
| 20 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | |
| 10 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | |
| 1200 U.T. | Surface | 17 | 14 | 1 | 12 | 0 | — | 3 | 14 | 0 | — | 2 | 6 | 1 | 13 | 0 | — | 0 | — | 0 | — | 2 | 8 | 2 | 10 | 2 | 30 | 12 |
| | 1000 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| | 850 | 5 | 14 | 7 | 9 | 2 | 6 | 2 | 12 | 3 | 15 | 0 | — | 1 | 9 | 0 | — | 0 | — | 0 | — | 3 | 10 | 7 | 14 | 0 | 30 | 12 |
| | 700 | 3 | 9 | 2 | 11 | 4 | 26 | 1 | 12 | 2 | 16 | 1 | 3 | 0 | — | 2 | 16 | 0 | — | 2 | 16 | 6 | 14 | 7 | 19 | 0 | 30 | 16 |
| | 600 | 1 | 14 | 0 | — | 5 | 37 | 3 | 18 | 0 | — | 0 | — | 0 | — | 1 | 22 | 4 | 30 | 4 | 12 | 8 | 14 | 4 | 16 | 0 | 30 | 21 |
| | 500 | 1 | 11 | 2 | 14 | 0 | — | 1 | 86 | 0 | — | 0 | — | 0 | — | 0 | — | 6 | 22 | 13 | 27 | 2 | 11 | 3 | 17 | 0 | 28 | 24 |
| | 400 | 1 | 11 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 9 | 37 | 8 | 37 | 6 | 20 | 3 | 27 | 0 | 27 | 31 |
| | 300 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 2 | 62 | 11 | 48 | 6 | 46 | 3 | 46 | 0 | 22 | 48 |
| | 200 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 2 | 72 | 7 | 64 | 6 | 58 | 2 | 58 | 0 | 17 | 63 |
| | 150 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 3 | 68 | 3 | 77 | 2 | 54 | 0 | — | 0 | 8 | 68 |
| | 100 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| | 70 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| | 60 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| | 50 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| | 40 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| 30 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | |
| 20 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | |
| 10 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | |

N. — The number of cases the wind has been observed from the range of direction during the month.

T.N. — The total number of cases the wind has been observed for all directions during the month.

REVIEW OF AGRO-METEOROLOGICAL STATION AT EL KASR

APRIL 1964

Frequent sandstorms and unusual showers of rain with a remarkable heat wave in the first week and a prolonged cold wave prevailing during the second and third weeks.

The month started with a very minor cold spell, giving the highest values of the relative humidity and vapour pressure for the month on the 1 st., and the lowest values of evaporation from pan class A and Piche in the screen (5.6 mms. below normal) on the 2. nd. due to the small range of temperature and the lightest surface wind speeds at 2 and 3 metres above ground level, on that day. That had also led to the occurrence of the absolute minima of air temperature on the next morning for both 5 and 200 cms. (4.7°C below normal) as well as the lowest night time mean.

The distinguished heat wave started on the 3rd. and continued for the following four days with the main peak on the 4th. and a secondary one on the 6 th. During the first day, sandstorms prevailed causing the lowest value of sunshine duration (3.6 hours) and giving the absolute maxima of air temperature (14.0°C above normal) and soil temperature for the surface layers down to 10 cms. depth and also the highest values of the daily mean of air temperature (10°C above normal), water vapour pressure deficit (40.0 mms.), evaporation from pan class A and Piche in the screen (9.7 mms. above normal), the day time means of wind speeds at 50, 100, 200 and 300 cms. above ground and the lowest values of the relative humidity and vapour pressure at 1200 U.T.

Sand was suspended in the air on the next day and gave rise to the lowest value of total radiation.

The highest minima of air temperature at 5 and 200 cms. (4°C above normal) and also the night time mean were associated with the second peak on the 6 th., with sandstorms.

The prolonged cold wave began on the 7th. with successive cold fronts passing on the 12th. 16th. and 20th. and giving rain showers on these days, while rising sand preceded the first cold front only.

The lowest value of the maximum air temperature (3.3°C below normal) was observed on the 10th., while that of the daily mean (2.0°C below normal) occurred on the 22nd., when the absolute minima of soil temperatures for the surface layers down to 50 cms. depth and the lowest means of wind speeds at 50, 100, 200 and 300 cms. were recorded.

Another heat wave started on the 23rd and lasted for the next three days, with rising sand prevailing during the 25th and 26th and with the lowest duration of sunshine also on the 25th, and was followed by a cold wave which prevailed till the end of the month.

The mean maximum air temperature and the daily mean were about normal, while that of minimum temperature was slightly above (0.9°C). Also the mean relative humidity was 4% above normal and the Piche evaporation in the screen was 0.3 mm. below. The actual sunshine duration was 279.5 hours (72% of the possible duration). The total amount of rainfall was 13.5 mms. being more than four times the normal rainfall in April.

REVIEW OF AGRO-METEOROLOGICAL STATION AT TAHRIR

APRIL 1964

Mainly unsettled with frequent khamsin conditions.

A minor heat wave started on the 3rd., and continued for the next four days with two peaks on the 4 th. and the 6th.

On the first day, the lowest value of the relative humidity at 1200 U.T. (7%) occurred as well as the highest values of Piche evaporation in the free air at 120 cms. above ground level and the daily mean of air temperature, which led to the occurrence of the highest values of night time means of air temperature and wind speed at 2 metres, and the minima of air temperature at 200 and 5 cms. on the 5th.

Khamsin conditions prevailed violently during the second peak; strong winds were blowing giving rise to severe sandstorms, causing 0.6 hour of sunshine duration. The mean air temperature for the day time was the highest with the absolute maximum for the month (37.3°C). Also the vapour pressure deficit was maximum leading to the highest values of evaporation from pan class A and Piche in the screen and in the free air at 1 cm. above ground.

That heat wave was followed by a minor cold spell with the absolute minima of air temperature at 200 and 5 cms. on the 11 th. when the lowest values of mean wind speed for the day and night time also occurred.

The most marked cold spell prevailed during the period (14 th. to 22 nd.), giving rain showers on the 16 th. and 20th. On the last day, the lowest values of maximum air temperature, the means of the day and night time, the evaporation from pan class A and Piche in the screen and in the free air, were all recorded, and also the highest values of the mean relative humidity and that at 1200 U.T.

The absolute minima of soil temperature for the surface layers down to 50 cms. depth, were observed on the following day.

A pronounced heat wave started on the 23 rd. and continued for the next four days, giving the absolute maxima of soil temperatures for the above mentioned layers on the 26 th., when strong winds and sandstorms were prevailing; while maxima for further depths took place during the last three days of the month.

As compared with April of last year, the means of air temperature for the day, night time and day time were all lower by 1.1, 0.9 and 0.1°C respectively. Also the means of the day of relative humidity and vapour pressure were less by 4% and 0.8 mm. No material change was found in the means of evaporation and wind speed at 2 metres.

The total sunshine duration and global radiation were less by 17 hours and 600 gm./cm² approximately, while the total amount of rainfall was more by 3.1 mms.

As regards the extreme soil temperatures, the values were less by amounts not exceeding 4.6°C for most depths except, for maximum temperatures at 5 and 10 cms. where they were more by less than 1.4 °C.

REVIEW OF AGRO-METEOROLOGICAL STATION AT GIZA

APRIL 1964

With respect to air temperature and relative humidity, this month was about normal with one severe duststorm on the 20 th.

A warm spell prevailed during the 1st. week with the peak on the 4 th. when the maximum air temperature was 7.8°C above normal. On that day the highest values of evaporation from pan class A and Piche both in the open air at levels 120, 60 and 1 cms. and in the screen (10.3 mms. above normal) were all recorded, probably due to the largest range of air temperature experienced on that day. Also the highest minimum air temperature (8°C above normal) was associated with that warm spell and took place on the next day.

The most pronounced cold wave during the month started on the 13 th. and continued for the next 11 days with an active cold front passing on the 20th, giving rise to a severe dust storm followed by moderate showers in the afternoon. The absolute minima of air temperature at 2 metres (4.1°C below normal) occurred in the early mornings of the 19 th. and 22 nd. when those at 5 cms. above dry and wet soils also took place.

A minor warm spell of short duration began on the 25 th. with the peak on the 26th, when the absolute maxima of air temperature (5.2°C above normal) and soil temperatures in the three fields down to 10 cms. depth were also recorded. At 20 cms. depth, the maxima of soil temperatures for the dry and wet fields were noticed on the next day.

A distinguished cold wave started on the 27 th. and was continuing when the month ended.

Compared with April 1963, the night time mean air temperature was the same, while the day time mean was less by 4°C .

The mean relative humidity and mean vapour pressure were less by 3% and 0.7 mms. respectively.

With respect to the absolute minimum air temperature at 5 cms., the values were about the same above dry and wet soils, while above the grass it was less by 0.6°C .

The extreme soil temperatures at different depths in the dry field were generally lower by less than 1.3°C , except for the maximum soil temperatures at depths 0.3, 1 and 2 cms. where they were more.

With regard to the wet field, the differences were variable within 3°C . The maxima of soil temperatures in the grass field at the different depths were generally lower by less than 3.3°C , whereas the minima were about the same.

The means of the surface wind speed at 2 metres for the day, night time and day time were generally more by 0.4, 0.6 and 0.2 m/sec. respectively.

The total actual duration of bright sunshine was 71% of the total possible duration, being 11.8 hours less than April 1963.

The mean Piche evaporation of the day as well as the total potential evaporation, and evapo-transpiration for grass were generally less by 1.5, 2.1 and 1.5 mms. respectively; whereas the mean pan class A evaporation was about the same.

REVIEW OF AGRO-METEOROLOGICAL STATION AT KHARGA

APRIL 1964

Slightly warm and dry with a remarkable heat wave during the first two weeks and a distinguished cold spell prevailing in the third week followed by a minor warm spell.

The first heat wave was characterized by two pronounced peaks on the 6 th. and 12 th. On the 1 st. day, the absolute maximum of air temperature (11.5°C above normal), the highest daily mean and the day time mean temperature were reported as well as the highest values of soil temperatures of the surface layers down to 20 cms. of depth, and the lowest relative humidity of the month (5%).

The highest values of minimum air temperature at 200 cms. (11.5°C above normal), 20 and 5 cms. and of daily means of wind speed at 50, 100 and 200 cms. above dry soil and the lowest relative humidity (21% below normal) occurred on the following day; whereas the highest values of evaporation from Piche both in the screen (35.6 mms. above normal) and in the free air at levels 160 and 120 cms. above ground, and also that from pan class A, were all associated with the second peak together with the lowest values of mean vapour pressure and the relative humidity (7%) and also the highest vapour pressure deficit (59.5 mms.)

The remarkable cold spell started on the 15 th. when the lowest values of the total radiation and sunshine duration were observed and continued for the next ten days with a peak on the 17 th. and another distinguished one on the 21 st.

On the latter day, the lowest values of maximum air temperature, daily and day time means, Piche evaporation both in the screen and in the free air and the highest value of the total radiation occurred.

The absolute minima of air temperature at 2 metres (6.9°C below normal) and at 5 and 20 cms. above bare soil as well as those of soil temperature for the surface layers down to 10 cms. of depth were recorded on the following day and also the highest duration of sunshine.

The minor warm spell started on the 25 th., when the lowest values of relative humidity and vapour pressure at 1200 U.T. and pan class A evaporation occurred and also the daily means of wind speed at 50, 100 and 200 cms. above the ground.

The daily means of air temperature and Piche evaporation in the screen were higher than normal by 1.4°C and 15.3 mms. respectively while the mean relative humidity was less by 13 %.

Table C 1.—AIR TEMPERATURE AT 2 METRES ABOVE GROUND

APRIL — 1964

| STATION | Air Temperature (°C) | | | | | Mean Duration in hours of daily air temperature above the following values | | | | | | | | | | | |
|-------------------|----------------------|--------------|-----------------------|-----------------------|---------------------|---|------|------|------|------|------|------|------|------|------|------|--|
| | Mean Max. | Mean Min. | Mean of the day | Night time mean | Day time mean | -5°C | 0°C | 5°C | 10°C | 15°C | 20°C | 25°C | 30°C | 35°C | 40°C | 45°C | |
| El Kasr | 22.2 | 11.8 | 17.1 | 14.9 | 19.0 | 24.0 | 24.0 | 24.0 | 23.6 | 17.6 | 2.8 | 0.6 | 0.2 | 0.1 | 0.0 | 0.0 | |
| Tahrir | 27.0 | 10.1 | 18.6 | 15.6 | 21.2 | 24.0 | 24.0 | 24.0 | 23.8 | 16.7 | 9.0 | 2.8 | 0.6 | 0.2 | 0.0 | 0.0 | |
| Giza | 27.5 | 11.9 | 19.4 | 16.7 | 21.7 | 24.0 | 24.0 | 24.0 | 23.4 | 17.1 | 10.0 | 3.3 | 0.7 | 0.0 | 0.0 | 0.0 | |
| Kharga | 33.9 | 17.0 | 25.5 | 22.5 | 28.2 | 24.0 | 24.0 | 24.0 | 23.9 | 23.1 | 19.7 | 12.5 | 6.1 | 1.6 | 0.4 | 0.0 | |

Table C 2.—ABSOLUTE VALUES OF AIR TEMPERATURE AT 2 METRES ABOVE GROUND, ABSOLUTE MINIMUM AIR TEMPERATURE AT 5cms ABOVE GROUND OVER DIFFERENT FIELDS

APRIL — 1964

| STATION | Max. Temp. at 2 metres | | | | Min. Temp. at 2 metres | | | | Min. Temp. at 5 cms. above | | | |
|-------------------|------------------------|------|--------|------|------------------------|------|--------|------|----------------------------|------|-------|------|
| | Highest | | Lowest | | Highest | | Lowest | | Dry Soil | | Grass | |
| | Value | Date | Value | Date | Value | Date | Value | Date | Value | Date | Value | Date |
| El Kasr | 36.2 | 4 | 19.0 | 10 | 15.9 | 6 | 7.9 | 3 | 5.6 | 3 | — | — |
| Tahrir | 37.3 | 6 | 21.3 | 20 | 16.4 | 5 | 8.7 | 11 | 6.2 | 11 | — | — |
| Giza | 35.3 | 26 | 22.7 | 16 | 18.6 | 5 | 8.4 | 19 | 4.8 | 22 | 2.5 | 20 |
| Kharga | 43.4 | 6 | 25.4 | 21 | 25.3 | 7 | 8.5 | 22 | 7.3 | 22 | — | — |

Table C 3.—(SOLAR + SKY) RADIATION, DURATION OF BRIGHT SUNSHINE, RELATIVE HUMIDITY & VAPOUR PRESSURE AT 2 METRES ABOVE GROUND, EVAPORATION & RAINFALL

APRIL — 1964

| STATION | Solar+Sky Radiation gm. cal/cm ² | Duration of Bright Sunshine (hours) | | | Relative Humidity % | | | | | | Vapour Pressure (mms) | | | | | | Evapora- tion(mms) | | Rainfall (mms) | | |
|------------------|--|-------------------------------------|---------------------------|----|----------------------|----------|-------------|-----------|--------|------|-----------------------|------------|---------|------|--------|------|-----------------------|---------------|-------------------------|-------------------------|------|
| | | Total Actual | Total Possible monthly | % | Duration in hours | | Mean of day | 1200 U.T. | Lowest | Date | Mean of day | 1200 UT | Highest | Date | Lowest | Date | Piche | Pan class (A) | Total Amount monthly | Max. fall in one day | Date |
| | | | | | > 90% | > 80% | | | | | | | | | | | | | | | |
| Kasr. | 508.0 | 279.5 | 388.2 | 72 | — | — | 72 | 62 | 11 | 4 | 10.6 | 10.9 | 14.0 | 1 | 4.0 | 4 | — | 6.80 | 13.5 | 8.3 | 15 |
| Tahrir | 560.0 | 280.6 | 387.6 | 73 | 2.3 | 6.1 | 61 | 35 | 7 | 4 | 9.0 | 7.9 | 13.8 | 2 | 2.5 | 4 | 14.6 | 9.90 | 5.5 | 3.5 | 16 |
| Giza | 555.7 | 274.7 | 387.0 | 71 | 0.9 | 3.7 | 55 | 32 | 11 | 12 | 8.6 | 7.5 | 12.6 | 26 | 4.2 | 12 | 14.6 | 8.77 | 1.4 | 1.4 | 20 |
| Kharga | 563.7 | 328.1 | 382.0 | 86 | 0.0 | 0.0 | 22 | 13 | 5 | 6 | 5.0 | 4.6 | 9.3 | 27 | 2.1 | 12 | 37.3 | 18.73 | 0.0 | — | — |

**Table C 4.—EXTREME SOIL TEMPERATURE AT DIFFERENT DEPTHS
IN DIFFERENT FIELDS (cms)**

APRIL — 1964

[illegible]

Table C 5.—SURFACE WIND

APRIL — 1964

[illegible]



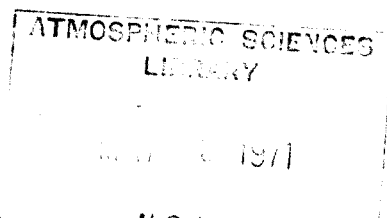
UNITED ARAB REPUBLIC

MONTHLY WEATHER REPORT

VOLUME 7

NUMBER 1

MAY, 1964



U.D.C. 551, 506,1 (62)

MINISTRY OF SCIENTIFIC RESEARCH — METEOROLOGICAL DEPARTMENT
CAIRO

PUBLICATIONS OF THE METEOROLOGICAL DEPARTMENT OF THE UNITED ARAB REPUBLIC—CAIRO

In fulfilment of its duties as the National Meteorological service for the U.A.R., the Meteorological Department issues several reports and publications on weather, climate and agrometeorology. The principal publications are described on this page.

Orders for publications should be addressed to :—

“The Director General, Meteorological Department, Kubri-el-Qubbeh—CAIRO”.

THE DAILY WEATHER REPORT

This report is printed daily in the Meteorological Department. It contains surface and upper air observations carried by the relevant networks of the Republic and made at the four main synoptic hours of observations (00, 06, 12 and 18 U.T.); as well as ship observations over the Eastern Mediterranean and north Red Sea made at the same times.

It also contains two surface synoptic charts at 00 and 12 U.T. and two upper air charts for the standard isobaric surfaces 700 & 500 mbs. at both 00 and 12 U.T.

In compliance with resolution 8 (EC-XIII) of WMO, foreign upper air data included in Cairo Subregional Broadcast are also given in this report.

THE MONTHLY WEATHER REPORT

First issued in 1909, the Monthly Weather Report served to give a brief summary of the weather conditions that prevailed over Egypt during the month, with a table showing the mean values for few meteorological elements and their deviations from the normal values. From 1954 to 1957 this report was in a rapid state of development and extension resulting into a voluminous report on January 1958 giving surface, upper air, and agro-meteorological data for U.A.R.

THE AGRO-METEOROLOGICAL ABRIDGED MONTHLY REPORT

Gives a review of weather experienced in the agro-meteorological stations of the U.A.R. as well as monthly values of certain elements.

THE ANNUAL REPORT

This report gives annual values and statistics for the various meteorological elements, together with a summary of the weather conditions that prevailed during all months of the year .

CLIMATOLOGICAL NORMALS FOR EGYPT

The normals, long averages and statistical data are given in one edition for stations in Egypt from the date of opening of each station up to 1945. A new voluminous edition was issued in March 1968 which brings normals and mean values up till 1960.



UNITED ARAB REPUBLIC

MONTHLY WEATHER REPORT

VOLUME 7

NUMBER 5

MAY, 1964

U.D.C. 551, 506,1 (62)

MINISTRY OF SCIENTIFIC RESEARCH—METEOROLOGICAL DEPARTMENT
CAIRO

CONTENTS

| | PAGE |
|---|------|
| General Summary of Weather Conditions | 1-2 |

SURFACE DATA

| | |
|--|-----|
| Table A1.—Monthly values of the Atmospheric Pressure, Air Temperature, Relative Humidity, Bright Sunshine Duration and Piche Evaporation | 3 |
| „ A2.—Maximum and Minimum Air Temperatures | 4 |
| „ A3.—Sky Cover and Rainfall | 5 |
| „ A4.—Number of Days of Occurrence of Miscellaneous Weather Phenomena | 6 |
| „ A.5.—Number in Hours of Occurrences of Concurrent Surface Wind Speed and Direction Recorded Within Specified Ranges | 7,8 |

UPPER AIR DATA

| | |
|---|-------|
| Table B1.—Monthly Means and Monthly Absolute Higher & Lower Values of Altitude, air Temperature & Dew point at Standard and Selected Pressure Surface | 9,10 |
| „ B2.—Mean and Extreme values of The Freezing Level and The Tropopause; The Highest Wind Speed in The Upper Air | 11 |
| „ B3.—Number of Occurences of Wind Direction Within Specified Ranges and The Mean Scalar Wind Speed at the Standard and Selected Pressure Surfaces | 12-14 |

AGRO-METEOROLOGICAL DATA

| | |
|--|-------|
| Reviews of Agro-meteorological stations | 15-17 |
| Table C1.—Air Temperature at 2 Metres Above Ground | 18 |
| „ C2.—Absolute Values of Air Temperature at 2 Metres Above Ground, Absolute Minimum Air Temperature at 5 Cms Above Ground Over Different Fields. | 18 |
| „ C3.—(Solar + Sky) Radiation, Duration of Bright Sunshine, Relative Humidity and Vapour Pressure at 2 Metres Above Ground, Evaporation and Rainfall | 18 |
| „ C4.—Extreme Soil Temperature at Different Depths in Different Fields | 19 |
| „ C5.—Surface wind | 19 |

GENERAL SUMMARY OF WEATHER CONDITIONS

MAY 1964

Abnormally mild in the northern and middle parts, rather hot in the southern parts during the 1st two thirds of the month, excessively hot in general the last third. Local heavy rain over Mediterranean coastal strip east of Alexandria on the 9th.

GENERAL DESCRIPTION OF WEATHER

During the first two thirds the prevailing weather was mild in general in the northern and middle parts, and rather hot in the southern parts. A weak heat wave occurred on the 19th & 20th. Since the 25th and up till the end of the month an excessive heat wave prevailed and maximum temperature exceeded appreciably its normal and attained its climax round the 29th.

Light rain fell over scattered localities in the northern parts during periods (7th-10th) & (19th & 20th) and was occasionally associated with few thunderstorms.

Rising sand occurred during several days, mainly in association with the travelling secondary depressions over scattered parts; its frequency was highest in the Western Desert and Red Sea districts. Early morning mist developed during several days over Delta, Canal and Cairo areas.

PRESSURE DISTRIBUTION

During this month, the subtropical high pressure belt established over West Mediterranean and Southern Europe. It showed occasional marked elongations southeastwards over North Africa, and eastwards towards the Black Sea vicinities.

Southward oscillations in the deep upper troughs either over north Atlantic or north Russia, and the associated deepening in the transitory low pressure systems through

northern Europe along their preferred north-east tracks, were responsible for the pronounced northwest elongation in the Iraq monsoon trough and the northward elongation in either the Sudan trough of low pressure or the Central Africa low pressure System.

Between the 5th & 7th, the Iraq monsoon trough showed a marked northwest elongation through Asia Minor, while the Sudan trough showed a marked northward elongation and the barometric pressure over the Middle East and northern vicinities experienced a rapid and deep fall.

On the 9th & 10th, the Iraq monsoon trough showed a slight westward oscillation which hardly extended to East Mediterranean where it caused a slight fall in the pressure field.

Between the 11th & 13th, a shallow secondary depression developed over the Gulf of Serte. It proceeded rapidly eastwards while slightly deepening and traversed the northern parts of the Republic on the 13th.

On the 16th, the second north Africa secondary depression appeared over Tunisia, it proceeded eastwards, passed by Gulf of Serte on the 18th, overrun the Western Desert and north of Nile valley by the 20th and continued rapidly its eastward transit through the Red Sea by the 21st.

On the 22nd, the third and last north Africa secondary depression during this month developed over Algiers. It followed

its coastal track passing by Tunisia round the 24th, Cyrenica by the 26th, then it reached northern parts of U.A.R. on the 29th and amalgamated with the northern extension of the Sudan trough.

The barometric pressure over the country exceeded generally its normal apart from the days 7th, 20th and between 27th & 31st during which it was subnormal.

During the whole month, the subtropical jet stream was evident in the upper troposphere round 190 mb level.

The highest wind speeds recorded at Mersa Matruh, Helwan & Aswan were 175, 150, 135 knots respectively on the 1st day of the month.

SURFACE WIND

During this month, the prevailing winds were light/moderate northerly and north-easterly in general, with the exception of few days during which fresh/strong winds blew either from the south and southwest in advance of travelling depressions or from the north and northwest in their rears.

No gales were reported during this month.

TEMPERATURE

Maximum & Minimum air temperatures were subnormal in general, with the

exception of the two heat waves particularly the excessive wave during which both temperatures were abnormally high.

The absolute maximum air temperature for the Republic was 48.3°C reported at Kom Ombo on the 31st.

The absolute minimum air temperature for the Republic was 6.2°C reported at Mansoura on the 1st.

PRECIPITATION

This month was characterized with two light rainy periods. The first was between the 7th & 10th during which light showers fell in general over the Mediterranean coastal strip between Alexandria & Ghazza. Precipitation was locally heavy in particular between Rosetta and Balteam. The second light rainy period was between the 19th & 20th during which light showers fell over the Mediterranean coastal strip west of Dabaa.

The absolute daily rainfall for the Republic was 8.8 mms reported at Rosetta on the 9th. The absolute monthly rainfall was 10.3 mms reported at Rosetta L.H.

Cairo 19 / 8 / 1970

M.F. TAHA
Under Secretary of State
Director General
Meteorological Department

**TABLE A 1. — MONTHLY VALUES OF THE ATMOSPHERIC PRESSURE, AIR TEMPERATURE,
RELATIVE HUMIDITY, BRIGHT SUNSHINE DURATION & PICHE EVAPORATION.**

MAY — 1964

| STATION | Atmospheric Pressure (mbs) M.S.L | | Air Temperature °C | | | | | | | | | Relative Humidity % | | Bright Sunshine Duration (Hours) | | | Piche Evap- (mms) Mean |
|----------------------------|-------------------------------------|------------------------------|--------------------|---------------------------------|-------------|---------------------------------|----------|----------|---------------------------------|----------|---------------------------------|------------------------|---------------------------------|-------------------------------------|-------------------|------|---------------------------------|
| | | | Maximum | | Minimum | | A+B 2 | Dry Bulb | | Wet Bulb | | | | | | | |
| | Mean | D.F. Normal or Average | (A) Mean | D.F. Normal or Average | (B) Mean | D.F. Normal or Average | | Mean | D.F. Normal or Average | Mean | D.F. Normal or Average | Mean | D.F. Normal or Average | Total Actual | Total Possible | % | |
| Sallum | 1014.6 | +0.2 | 24.8 | -1.0 | 17.0 | +0.1 | 20.9 | 20.5 | -0.5 | 16.6 | +0.2 | 65 | + 4 | — | — | — | 7.6 |
| Mersa Matruh (A) | 1015.1 | +1.6 | 24.6 | -0.9 | 14.4 | -0.1 | 19.5 | 19.5 | -0.7 | 15.6 | -1.0 | 64 | - 3 | 322.4 | 426.5 | 75.6 | 7.7 |
| Alexandria (A) | 1014.5 | +1.6 | 26.4 | -0.1 | 14.8 | -1.9 | 20.6 | 20.5 | -0.9 | 16.1 | -1.6 | 61 | - 9 | 359.1 | 425.6 | 84.4 | 7.3 |
| Port Said (A) | 1014.1 | +1.2 | 24.0 | -1.8 | 17.7 | -1.7 | 20.8 | 20.6 | -1.6 | 17.0 | -2.0 | 69 | - 3 | 341.5 | 425.6 | 80.2 | 3.3 |
| El Arish | 1014.2 | +2.7 | 25.7 | -1.3 | 15.6 | -0.5 | 20.6 | 20.5 | -1.5 | 17.1 | -1.0 | 70 | + 3 | 370.3 | 426.2 | 86.9 | 5.2 |
| Ghazza | 1013.9 | +1.7 | 22.8 | -2.2 | 15.0 | -1.6 | 18.9 | 19.5 | -1.6 | 16.6 | -1.4 | 73 | + 1 | 363.2 | 426.6 | 85.1 | 5.1 |
| Tanta | 1013.3 | — | 30.8 | — | 13.2 | — | 22.0 | 21.7 | — | 15.7 | — | 50 | — | 358.4 | 424.5 | 84.4 | 8.1 |
| Cairo (A) | 1013.5 | +1.3 | 31.3 | -1.1 | 17.8 | +0.4 | 24.6 | 23.6 | -1.2 | 15.6 | -1.7 | 38 | - 6 | — | — | — | 20.2 |
| Fayoum | 1013.2 | — | 32.3 | — | 16.2 | — | 24.2 | 24.2 | — | 15.7 | — | 35 | — | — | — | — | 11.5 |
| Minya (A) | 1012.9 | +2.0 | 32.8 | -3.6 | 14.4 | -2.2 | 23.6 | 24.2 | -1.7 | 15.9 | -0.9 | 37 | + 1 | — | — | — | 11.8 |
| Assyout (A) | 1012.2 | +1.7 | 34.2 | -2.2 | 17.8 | -1.6 | 26.0 | 26.3 | -1.6 | 14.8 | -1.3 | 22 | - 1 | — | — | — | 21.4 |
| Luxor (A) | 1010.5 | +1.9 | 35.7 | -3.6 | 18.1 | -2.6 | 26.9 | 28.0 | -1.4 | 16.0 | -1.7 | 22 | 0 | — | — | — | 13.9 |
| Aswan (A) | 1010.4 | +2.0 | 37.1 | -3.2 | 20.1 | -3.4 | 28.6 | 28.9 | -1.3 | 14.7 | -1.3 | 13 | + 1 | — | — | — | 22.1 |
| Siwa | 1013.8 | +0.8 | 33.1 | -1.3 | 16.0 | -0.8 | 24.6 | 25.0 | -0.9 | 15.0 | -0.7 | 28 | - 1 | — | — | — | 15.6 |
| Bahariya | 1013.2 | +1.3 | 33.0 | -1.1 | 16.3 | -0.3 | 24.6 | 25.2 | -0.7 | 15.0 | -0.9 | 27 | - 3 | — | — | — | 10.7 |
| Farafra | 1014.4 | — | 33.2 | — | 15.1 | — | 24.2 | 24.4 | — | 13.3 | — | 20 | — | — | — | — | 18.7 |
| Dakhla | 1010.9 | +1.4 | 34.7 | -2.4 | 15.8 | -4.2 | 25.2 | 26.0 | -1.3 | 14.5 | -0.3 | 21 | + 3 | — | — | — | 17.0 |
| Kharga | 1012.1 | — | 35.4 | — | 19.4 | — | 27.5 | 27.9 | — | 14.7 | — | 16 | — | 384.3 | 414.0 | 92.8 | 30.2 |
| Tor | 1010.9 | +1.9 | 30.1 | -1.5 | 19.8 | -0.8 | 25.0 | 24.4 | -0.7 | 17.9 | -1.5 | 50 | - 6 | — | — | — | 10.0 |
| Hurghada | 1010.9 | +1.8 | 29.8 | +0.2 | 18.5 | -2.2 | 24.6 | 24.7 | -1.0 | 16.6 | -1.9 | 39 | - 7 | — | — | — | 20.3 |
| Quesir | 1011.1 | +2.7 | 28.3 | -2.1 | 21.3 | -1.6 | 24.8 | 25.2 | -1.5 | 17.4 | -1.7 | 42 | - 3 | — | — | — | 20.2 |

— 5 —

TABLE A2.— MAXIMUM AND MINIMUM AIR TEMPERATURES

MAY — 1964

| Station | Maximum Temperature °C | | | | | | | | | Grass Min. Temp. | | Minimum Temperature °C | | | | | | | | |
|-----------------------|------------------------|------|--------|------|----------------------------|-----|-----|-----|-----|------------------|----------------|------------------------|-------|--------|------|-----------------------------|----|----|-----|--|
| | Highest | Date | Lowest | Date | No. of Days with Max-Temp. | | | | | Mean | D. From Normal | Highest | Date | Lowest | Date | No. of Days with Min. Temp. | | | | |
| | | | | | >25 | >30 | >35 | >40 | >45 | | | | | | | <10 | <5 | <0 | <-5 | |
| Sallum | 35.5 | 29 | 19.7 | 1 | 11 | 4 | 1 | 0 | 0 | 16.7 | — | 22.4 | 29 | 12.6 | 1 | 0 | 0 | 0 | 0 | |
| Mersa Matruh . (A) | 40.0 | 29 | 20.2 | 1,5 | 9 | 3 | 3 | 0 | 0 | — | — | 19.9 | 27 | 10.7 | 2 | 0 | 0 | 0 | 0 | |
| Alexandria . . . (A) | 42.2 | 29 | 21.0 | 9 | 13 | 5 | 4 | 1 | 0 | — | — | 23.6 | 31 | 10.8 | 2 | 0 | 0 | 0 | 0 | |
| Port Said (A) | 32.7 | 28 | 20.4 | 1 | 9 | 1 | 0 | 0 | 0 | 17.0 | — | 23.6 | 30 | 13.4 | 10 | 0 | 0 | 0 | 0 | |
| El Arish | 36.8 | 30 | 21.6 | 1 | 12 | 4 | 1 | 0 | 0 | 13.8 | — | 20.6 | 29 | 12.0 | 6 | 0 | 0 | 0 | 0 | |
| Ghazza | 28.8 | 29 | 20.1 | 2 | 6 | 0 | 0 | 0 | 0 | 14.2 | — | 21.8 | 29,30 | 11.5 | 2 | 0 | 0 | 0 | 0 | |
| Tanta | 42.4 | 29 | 23.2 | 9 | 29 | 15 | 5 | 4 | 0 | — | — | 20.4 | 31 | 9.0 | 1 | 2 | 0 | 0 | 0 | |
| Cairo (A) | 43.7 | 30 | 25.3 | 8 | 30 | 15 | 6 | 4 | 0 | — | — | 28.6 | 29 | 12.6 | 1,2 | 0 | 0 | 0 | 0 | |
| Fayoum | 43.2 | 29 | 24.5 | 9 | 30 | 19 | 6 | 4 | 0 | 12.2 | — | 24.0 | 30 | 10.6 | 1 | 0 | 0 | 0 | 0 | |
| Minya (A) | 43.9 | 30 | 25.8 | 9 | 31 | 22 | 7 | 5 | 0 | 11.5 | — | 22.2 | 29 | 9.0 | 10 | 1 | 0 | 0 | 0 | |
| Assyout (A) | 44.6 | 31 | 27.0 | 10 | 31 | 26 | 10 | 5 | 0 | 15.8 | — | 25.2 | 29 | 11.6 | 1 | 0 | 0 | 0 | 0 | |
| Luxor (A) | 46.2 | 31 | 29.6 | 10 | 31 | 29 | 17 | 5 | 2 | — | — | 26.5 | 31 | 13.7 | 10 | 0 | 0 | 0 | 0 | |
| Aswan (A) | 45.8 | 30 | 29.8 | 10 | 31 | 30 | 21 | 5 | 2 | — | — | 31.5 | 31 | 15.0 | 10 | 0 | 0 | 0 | 0 | |
| Siwa | 43.9 | 29 | 25.3 | 9 | 31 | 22 | 11 | 4 | 0 | 14.6 | — | 23.4 | 30 | 9.2 | 10 | 1 | 0 | 0 | 0 | |
| Bahariya | 45.2 | 30 | 25.8 | 9 | 31 | 23 | 8 | 4 | 1 | 14.5 | — | 26.2 | 31 | 9.9 | 10 | 1 | 0 | 0 | 0 | |
| Farafra | 44.0 | 30 | 26.8 | 9 | 31 | 26 | 8 | 4 | 0 | 14.3 | — | 24.0 | 31 | 8.0 | 11 | 3 | 0 | 0 | 0 | |
| Dakhla | 45.3 | 30 | 28.0 | 9,10 | 31 | 27 | 10 | 5 | 1 | 11.1 | — | 24.0 | 28 | 7.0 | 11 | 1 | 0 | 0 | 0 | |
| Kharga | 46.2 | 31 | 29.2 | 9,10 | 31 | 29 | 13 | 5 | 2 | 17.0 | — | 25.9 | 28 | 13.8 | 10 | 0 | 0 | 0 | 0 | |
| Tor | 40.2 | 30 | 24.0 | 1 | 29 | 14 | 2 | 1 | 0 | — | — | 23.8 | 30 | 13.2 | 2 | 0 | 0 | 0 | 0 | |
| Hurgada | 39.4 | 29 | 25.1 | 1 | 31 | 7 | 4 | 0 | 0 | 17.0 | — | 22.4 | 29,31 | 14.5 | 2 | 0 | 0 | 0 | 0 | |
| Quesir | 35.2 | 14 | 25.1 | 10 | 31 | 6 | 1 | 0 | 0 | 17.9 | — | 25.0 | 28,29 | 18.0 | 11 | 0 | 0 | 0 | 0 | |

TABLE A 3.—SKY COVER AND RAINFALL

MAY — 1964

| Station | Mean Sky Cover Oct. | | | | | Rainfall mm. | | | | | | | | | | |
|--------------------------|---------------------|------|------|------|-------|-----------------|----------------|-------------------------|------|------------------------------------|------|------|------|-----|-----|-----|
| | 00 | 06 | 12 | 18 | Daily | Total Amount | D. From Normal | Max. Fall in one day | | Number of Days with Amount of Rain | | | | | | |
| | U.T. | U.T. | U.T. | U.T. | Mean | | | Amount | Date | <0.1 | ≥0.1 | ≥1.0 | ≥5.0 | ≥10 | ≥25 | ≥50 |
| Sallum | 2.7 | 3.3 | 3.4 | 3.3 | 3.1 | 1.4 | — 2.9 | 1.4 | 19 | 1 | 1 | 1 | 0 | 0 | 0 | 0 |
| Mersa Matruh . . . (A) | 1.5 | 3.3 | 2.5 | 2.3 | 2.3 | 0.5 | — 2.7 | 0.3 | 20 | 1 | 2 | 0 | 0 | 0 | 0 | 0 |
| Alexandria (A) | 1.8 | 2.8 | 1.9 | 2.2 | 2.1 | 2.6 | + 1.1 | 2.6 | 9 | 0 | 1 | 1 | 0 | 0 | 0 | 0 |
| Port Said (A) | 0.9 | 1.5 | 0.9 | 0.6 | 1.0 | 0.6 | — 2.9 | 0.4 | 10 | 0 | 2 | 0 | 0 | 0 | 0 | 0 |
| El Arish | 3.4 | 2.7 | 1.9 | 1.9 | 2.2 | 0.5 | — 3.2 | 0.5 | 10 | 1 | 1 | 0 | 0 | 0 | 0 | 0 |
| Ghazze | 3.9 | 2.0 | 0.9 | 2.0 | 2.2 | 2.3 | — 1.1 | 2.0 | 9 | 0 | 3 | 1 | 0 | 0 | 0 | 0 |
| Tanta | — | 0.8 | 1.4 | 0.5 | — | 0.2 | — 4.0 | 0.2 | 10 | 0 | 1 | 0 | 0 | 0 | 0 | 0 |
| Cairo (A) | 0.2 | 1.2 | 1.9 | 1.3 | 1.4 | 0.0 | — 0.5 | 0.0 | — | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Fayoum | — | 0.2 | 0.9 | 0.2 | — | 0.0 | — 1.5 | 0.0 | — | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Minya (A) | 0.1 | 0.3 | 1.3 | 0.7 | 0.6 | 0.0 | — 0.7 | 0.0 | — | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Assyout (A) | 0.1 | 0.1 | 0.5 | 0.2 | 0.3 | 0.0 | — Tr. | 0.0 | — | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Luxor (A) | 0.2 | 0.5 | 0.3 | 0.1 | 0.3 | 0.0 | — 0.5 | 0.0 | — | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Aswan (A) | 1.0 | 0.5 | 0.5 | 0.7 | 0.5 | Tr. | — 0.6 | Tr. | 30 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| Siwa | 0.7 | 1.6 | 2.2 | 2.0 | 2.6 | 0.0 | — 2.1 | 0.0 | — | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Bahariya | 0.2 | 0.6 | 1.5 | 1.0 | 1.5 | 0.0 | — 0.1 | 0.0 | — | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Farafra | 0.3 | 0.6 | 1.2 | 0.7 | 0.6 | 0.0 | — Tr. | 0.0 | — | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Dakhla | 0.0 | 0.4 | 0.1 | 0.4 | 0.5 | 0.0 | — 0.2 | 0.0 | — | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Kharga | 0.1 | 0.3 | 0.3 | 0.2 | 0.2 | 0.0 | — 0.3 | 0.0 | — | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Tor | 1.0 | 0.3 | 0.4 | 0.5 | 0.4 | 0.0 | — 0.2 | 0.0 | — | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Hurgada | 0.3 | 0.3 | 0.5 | 0.8 | 0.4 | 0.0 | — 0.5 | 0.0 | — | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Quesir | 0.2 | 0.5 | 0.4 | 0.4 | 0.4 | 0.0 | — Tr. | 0.0 | — | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

TABLE A 4. — DAYS OF OCCURRENCE OF MISCELLANEOUS WEATHER PHENOMENA.

MAY 1964

| Station | Precipitation | | | | Frost | Thunderstorm, | Mist Vis \geq 1000 metres | Fog Vis $<$ 1000 Metres | Haze Vis \geq 1000 Metres | Thick Haze Vis $<$ 1000 Metres | Dust or Sandstorming Vis \geq 1000 Metres | Dust or Sandstorm Vis $<$ 1000 Metres | Gale | Clear Sky | Cloudy Sky |
|----------------------------|---------------|------|--------------|------|-------|---------------|-----------------------------|-------------------------|-----------------------------|--------------------------------|---|---------------------------------------|------|-----------|------------|
| | Rain | Snow | Ice, Pellets | Hail | | | | | | | | | | | |
| Sallum | 2 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 11 | 5 |
| Mersa Matruh (A) | 1 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 0 | 0 | 3 | 0 | 0 | 16 | 2 |
| Alexandria (A) | 2 | 0 | 0 | 1 | 0 | 1 | 4 | 4 | 0 | 0 | 0 | 1 | 0 | 16 | 1 |
| Port Said (A) | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 25 | 0 |
| El Arish | 1 | 0 | 0 | 0 | 0 | 0 | 6 | 1 | 0 | 0 | 3 | 0 | 0 | 15 | 0 |
| Ghazza | 2 | 0 | 0 | 0 | 0 | 0 | 2 | 1 | 0 | 0 | 1 | 0 | 0 | 13 | 0 |
| Tanta | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | — | — |
| Cairo (A) | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 13 | 0 | 6 | 1 | 0 | 24 | 0 |
| Fayoum | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | — | — |
| Minya (A) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 0 | 30 | 0 |
| Assyout (A) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 4 | 0 | 0 | 31 | 0 |
| Luxor (A) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 0 | 5 | 0 | 0 | 31 | 0 |
| Aswan (A) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 2 | 0 | 0 | 29 | 0 |
| Siwa | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 20 | 0 |
| Bahariya | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 26 | 0 |
| Farafra | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5 | 0 | 0 | 29 | 0 |
| Dakhla | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 3 | 0 | 0 | 31 | 0 |
| Kharga | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 8 | 1 | 0 | 31 | 0 |
| Tor | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 4 | 0 | 0 | 29 | 0 |
| Hurghada | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 28 | 0 |
| Quseir | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 0 | 11 | 0 | 0 | 31 | 0 |

**Table A 5.—NUMBER IN HOURS OF OCCURRENCES OF CONCURRENT SURFACE
WIND SPEED AND DIRECTION RECORDED WITHIN SPECIFIED RANGES**

MAY — 1964

| Station | calm (hours) | Variable (hours) | Unrecorded (hours) | Wind speed in knots | Number in hours of occurrences of wind blowing from the ranges of directions indicated | | | | | | | | | | | | | |
|----------------|--------------|------------------|--------------------|---|--|---------------------------|---------------------------|--------------------------|--------------------------|---------------------------|-------------------------|--------------------------|-------------------------|--------------------------|--------------------------|----------------------------|-----------------------------|--|
| | | | | | 345 / 014 | 015 / 044 | 045 / 074 | 075 / 104 | 105 / 134 | 135 / 164 | 165 / 194 | 195 / 224 | 225 / 254 | 255 / 284 | 285 / 314 | 315 / 344 | All directions | |
| Matruh (A) | 85 | 1 | 16 | 1-10 11-27 28-47 ≥48 All speeds | 68 70 0 0 138 | 46 25 0 0 71 | 15 19 0 0 34 | 32 55 0 0 87 | 26 30 0 0 56 | 10 1 0 0 11 | 2 4 0 0 6 | 3 6 0 0 9 | 3 2 0 0 5 | 16 12 0 0 28 | 49 9 0 0 58 | 41 98 0 0 139 | 311 331 0 0 642 | |
| Alexandria (A) | 69 | 0 | 0 | 1-10 11-27 28-47 ≥48 All speeds | 89 18 0 0 107 | 51 17 0 0 68 | 51 3 0 0 54 | 48 2 0 0 50 | 50 1 0 0 51 | 18 0 0 0 18 | 10 0 0 0 10 | 18 1 0 0 19 | 8 7 0 0 15 | 8 7 0 0 15 | 77 15 0 0 92 | 160 16 0 0 176 | 588 87 0 0 675 | |
| Port Said (A) | 0 | 1 | 0 | 1-10 11-27 28-47 ≥48 All speeds | 103 111 1 0 215 | 78 55 0 0 133 | 64 43 0 0 107 | 56 23 0 0 79 | 22 0 0 0 22 | 8 0 0 0 8 | 4 0 0 0 4 | 11 19 0 0 30 | 12 9 0 0 21 | 7 6 0 0 13 | 13 6 0 0 19 | 49 43 0 0 92 | 427 315 1 0 743 | |
| Arish | 2 | 11 | 0 | 1-10 11-27 28-47 ≥48 All speeds | 111 10 0 0 121 | 75 3 0 0 78 | 24 1 0 0 25 | 14 0 0 0 14 | 26 0 0 0 26 | 108 0 0 0 108 | 23 0 0 0 23 | 56 0 0 0 57 | 20 1 0 0 27 | 14 7 0 0 21 | 56 14 0 0 70 | 146 15 0 0 161 | 673 58 0 0 731 | |
| Matruh | 0 | 41 | 0 | 1-10 11-27 28-47 ≥48 All speeds | 48 47 0 0 95 | 36 23 0 0 59 | 38 1 0 0 39 | 16 0 0 0 16 | 32 0 0 0 32 | 122 2 0 0 124 | 19 0 0 0 19 | 7 2 0 0 9 | 15 6 0 0 21 | 37 23 0 0 60 | 64 27 0 0 91 | 86 52 0 0 138 | 520 183 0 0 703 | |
| Matruh | 80 | 11 | 8 | 1-10 11-27 28-47 ≥48 All speeds | 68 11 0 0 79 | 53 19 0 0 72 | 63 6 0 0 69 | 55 5 0 0 60 | 49 0 0 0 49 | 2 0 0 0 2 | 2 0 0 0 2 | 17 0 0 0 17 | 25 3 0 0 28 | 36 8 0 0 44 | 72 4 0 0 76 | 130 17 0 0 147 | 572 73 0 0 645 | |
| Cairo (A) | 5 | 0 | 85 | 1-10 11-27 28-47 ≥48 All speeds | 42 56 0 0 98 | 78 55 0 0 133 | 77 89 0 0 166 | 40 43 0 0 83 | 6 25 0 0 31 | 1 18 0 0 17 | 2 5 0 0 7 | 1 12 0 0 13 | 0 6 0 0 6 | 0 8 0 0 8 | 10 10 0 0 20 | 42 30 0 0 72 | 299 355 0 0 654 | |
| Matruh | 2 | 28 | 0 | 1-10 11-27 28-47 ≥48 All speeds | 355 5 0 0 360 | 125 4 0 0 129 | 17 0 0 0 17 | 7 0 0 0 7 | 3 0 0 0 3 | 3 0 0 0 3 | 10 0 0 0 10 | 22 3 0 0 25 | 8 2 0 0 10 | 15 0 0 0 15 | 32 0 0 0 32 | 93 10 0 0 103 | 690 24 0 0 714 | |

Table A 5. (contd.)—NUMBER IN HOURS OF OCCURRENCES OF CONCURRENT SURFACE WIND SPEED AND DIRECTION RECORDED WITHIN SPECIFIED RANGES

MAY — 1964

| Station | calm (hours) | Variable (hours) | Unrecorded (hours) | Wind speed in knots | Number in hours of occurrences of wind blowing from the ranges of directions indicated | | | | | | | | | | | | | | All directions |
|---------------------|--------------|------------------|--------------------|---------------------|--|------|------|------|------|------|------|------|------|------|------|------|-----|--|----------------|
| | | | | | 345 | 015 | 045 | 075 | 105 | 135 | 165 | 195 | 225 | 255 | 285 | 315 | | | |
| | | | | | /014 | /044 | /074 | /104 | /134 | /164 | /194 | /224 | /254 | /284 | /314 | /344 | | | |
| Minya (A) | 16 | 3 | 0 | 1—10 | 38 | 21 | 6 | 7 | 10 | 4 | 2 | 7 | 7 | 23 | 87 | 178 | 390 | | |
| | | | | 11—27 | 10 | 4 | 0 | 0 | 1 | 4 | 1 | 8 | 16 | 5 | 25 | 261 | 335 | | |
| | | | | 28—47 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | |
| | | | | ≥ 48 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | |
| | | | | All speeds | 48 | 25 | 6 | 7 | 11 | 8 | 3 | 15 | 23 | 28 | 112 | 439 | 725 | | |
| Assyout (A) | 3 | 0 | 0 | 1—10 | 13 | 24 | 19 | 85 | 12 | 12 | 1 | 51 | 59 | 73 | 53 | 85 | 487 | | |
| | | | | 11—27 | 6 | 23 | 7 | 4 | 0 | 1 | 0 | 18 | 10 | 10 | 14 | 159 | 252 | | |
| | | | | 28—47 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 2 | | |
| | | | | ≥ 48 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | |
| | | | | All speeds | 20 | 47 | 26 | 89 | 12 | 13 | 1 | 69 | 69 | 84 | 67 | 244 | 741 | | |
| Luxor (A) | 10 | 0 | 0 | 1—10 | 49 | 62 | 32 | 24 | 31 | 35 | 44 | 40 | 18 | 44 | 90 | 199 | 668 | | |
| | | | | 11—27 | 1 | 2 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 22 | 40 | 66 | | |
| | | | | 28—47 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | |
| | | | | ≥ 48 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | |
| | | | | All speeds | 50 | 64 | 33 | 24 | 31 | 35 | 44 | 40 | 18 | 44 | 112 | 239 | 734 | | |
| Aswan (A) | 1 | 0 | 0 | 1—10 | 168 | 181 | 17 | 8 | 4 | 4 | 6 | 5 | 5 | 24 | 34 | 105 | 561 | | |
| | | | | 11—27 | 76 | 52 | 0 | 1 | 1 | 0 | 0 | 2 | 5 | 10 | 16 | 19 | 182 | | |
| | | | | 28—47 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | |
| | | | | ≥ 48 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | |
| | | | | All speeds | 244 | 233 | 17 | 9 | 5 | 4 | 6 | 7 | 10 | 34 | 50 | 124 | 743 | | |
| Siwa | 61 | 0 | 0 | 1—10 | 25 | 46 | 46 | 87 | 52 | 36 | 31 | 33 | 16 | 45 | 58 | 24 | 499 | | |
| | | | | 11—27 | 15 | 29 | 14 | 5 | 8 | 17 | 9 | 9 | 6 | 3 | 26 | 43 | 184 | | |
| | | | | 28—47 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | |
| | | | | ≥ 48 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | |
| | | | | All speeds | 40 | 75 | 60 | 92 | 60 | 53 | 40 | 42 | 22 | 48 | 84 | 67 | 683 | | |
| Dakhla | 3 | 38 | 0 | 1—10 | 90 | 112 | 49 | 37 | 30 | 21 | 18 | 36 | 34 | 43 | 86 | 114 | 670 | | |
| | | | | 11—27 | 1 | 13 | 3 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 14 | 1 | 33 | | |
| | | | | 28—47 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | |
| | | | | ≥ 48 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | |
| | | | | All speeds | 91 | 125 | 52 | 37 | 30 | 21 | 18 | 36 | 35 | 43 | 100 | 115 | 703 | | |
| Hurghada | 0 | 4 | 10 | 1—10 | 43 | 23 | 11 | 7 | 14 | 25 | 2 | 3 | 2 | 3 | 52 | 15 | 200 | | |
| | | | | 11—27 | 79 | 9 | 0 | 1 | 0 | 2 | 0 | 1 | 0 | 24 | 188 | 217 | 521 | | |
| | | | | 28—47 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 7 | 9 | | |
| | | | | ≥ 48 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | |
| | | | | All speeds | 122 | 32 | 11 | 8 | 14 | 27 | 2 | 4 | 2 | 27 | 242 | 239 | 730 | | |
| Quseir | 80 | 0 | 16 | 1—10 | 42 | 26 | 11 | 3 | 9 | 14 | 8 | 7 | 8 | 18 | 72 | 76 | 294 | | |
| | | | | 11—27 | 149 | 6 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 6 | 17 | 171 | 350 | | |
| | | | | 28—47 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 4 | 4 | | |
| | | | | ≥ 48 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | |
| | | | | All speeds | 191 | 32 | 11 | 3 | 9 | 15 | 8 | 7 | 8 | 24 | 89 | 251 | 648 | | |

TABLE B 1.—UPPER AIR CLIMATOLOGICAL DATA

MAY — 1964

| Station | Pressure Surface (Millibar) | Altitude of Pressure Surface (gpm) | | | | Temperature (°C) | | | | Dew Point (°C) | |
|----------------------|-----------------------------|------------------------------------|---------------|---------------|---------------|------------------|-------|---------|--------|----------------|-------|
| | | N | Mean | Highest | Lowest | N | Mean | Highest | Lowest | N | Mean |
| Mersa Matruh 0000 UT | Surface | 31 | * 1012m.b. | * 1017m.b. | * 1006m.b. | 31 | 17.4 | 23.0 | 13.2 | 31 | 14.6 |
| | 1000 | 31 | 151 | 189 | 98 | 31 | 17.5 | 26.0 | 14.1 | 31 | 13.3 |
| | 850 | 31 | 1537 | 1577 | 1496 | 31 | 13.6 | 23.6 | 3.6 | 29 | 1.6 |
| | 700 | 31 | 3139 | 3196 | 3070 | 31 | 2.2 | 9.0 | -5.0 | 24 | -4.9 |
| | 600 | 31 | 4367 | 4447 | 4266 | 31 | -5.7 | -1.8 | -11.3 | 23 | -13.7 |
| | 500 | 31 | 5771 | 5866 | 5642 | 31 | -15.7 | -12.0 | -21.7 | 17 | -23.4 |
| | 400 | 31 | 7416 | 7516 | 7290 | 31 | -27.9 | -25.1 | -32.5 | 15 | -34.5 |
| | 300 | 30 | 9415 | 9531 | 9225 | 30 | -43.2 | -38.3 | -48.0 | — | — |
| | 200 | 29 | 12055 | 12202 | 11891 | 29 | -55.7 | -41.3 | -62.0 | — | — |
| | 150 | 29 | 13473 | 14146 | 13746 | 29 | -58.5 | -43.4 | -63.7 | — | — |
| | 100 | 28 | 16398 | 16862 | 16280 | 28 | -61.5 | -44.9 | -68.4 | — | — |
| | 70 | 10 | 18633 | 19210 | 18490 | 10 | -59.0 | -46.0 | -67.5 | — | — |
| | 50 | 6 | 20675 | 21496 | 20603 | 6 | -57.5 | -44.5 | -59.7 | — | — |
| | 30 | 2 | 23994 | 24015 | 23973 | 2 | -51.3 | -50.7 | -51.7 | — | — |
| | 20 | 2 | 26632 | 26684 | 26580 | 2 | -46.4 | -45.9 | -46.8 | — | — |
| | 10 | — | — | — | — | — | — | — | — | — | — |
| Helwan 0000 UT | Surface | 31 | * 997m.b. | * 1003m.b. | * 990m.b. | 31 | 18.5 | 30.0 | 11.2 | 31 | 8.5 |
| | 1000 | 31 | 111 | 165 | 60 | 7 | 15.9 | 18.0 | 12.4 | 7 | 8.5 |
| | 850 | 31 | 1492 | 1526 | 1462 | 31 | 14.6 | 29.9 | 6.8 | 27 | -2.4 |
| | 700 | 31 | 3109 | 3166 | 3035 | 31 | 4.1 | 11.6 | -4.7 | 17 | -10.9 |
| | 600 | 31 | 4344 | 4416 | 4238 | 31 | -4.0 | 0.7 | -11.1 | 16 | -16.9 |
| | 500 | 31 | 5758 | 5844 | 5611 | 31 | -13.9 | -8.6 | -21.1 | 7 | -24.6 |
| | 400 | 31 | 7415 | 7528 | 7218 | 31 | -26.4 | -22.1 | -35.0 | 6 | -32.7 |
| | 300 | 31 | 9433 | 9575 | 9210 | 31 | -41.0 | -36.7 | -44.7 | — | — |
| | 200 | 31 | 12091 | 12264 | 11912 | 31 | -55.8 | -49.0 | -63.1 | — | — |
| | 150 | 31 | 13911 | 14069 | 13763 | 31 | -59.0 | -54.8 | -65.3 | — | — |
| | 100 | 29 | 16417 | 16546 | 16305 | 29 | -64.5 | -58.8 | -68.1 | — | — |
| | 70 | 25 | 18600 | 18770 | 18480 | 25 | -63.5 | -57.9 | -70.5 | — | — |
| | 50 | 20 | 20680 | 20790 | 20615 | 20 | -59.0 | -56.1 | -65.0 | — | — |
| | 30 | 15 | 23957 | 24073 | 23860 | 15 | -51.6 | -47.2 | -55.6 | — | — |
| | 20 | 6 | 26564 | 26658 | 26476 | 6 | -49.5 | -45.6 | -52.7 | — | — |
| | 10 | 1 | 31266 | — | — | 1 | -37.8 | — | — | — | — |
| Aswan. 0000 UT | Surface | 29 | * 987m.b. | * 992 m.b. | * 982m.b. | 29 | 22.8 | 34.0 | 17.5 | 29 | -1.0 |
| | 1000 | — | — | — | — | — | — | — | — | — | — |
| | 850 | 29 | 1491 | 1524 | 1451 | 29 | 19.2 | 28.4 | 12.5 | 21 | -2.9 |
| | 700 | 29 | 3125 | 3169 | 3064 | 29 | 8.1 | 12.9 | 3.6 | 13 | -8.9 |
| | 600 | 29 | 4378 | 4430 | 4306 | 29 | -4.1 | 3.7 | -3.2 | 12 | -11.4 |
| | 500 | 29 | 5809 | 5867 | 5724 | 29 | -10.9 | -6.7 | -15.1 | 8 | -19.8 |
| | 400 | 29 | 7489 | 7587 | 7398 | 29 | -22.2 | -15.7 | -28.0 | 5 | -34.6 |
| | 300 | 29 | 9543 | 9704 | 9395 | 29 | -36.3 | -28.2 | -40.3 | — | — |
| | 200 | 26 | 12250 | 12483 | 12087 | 26 | -54.0 | -49.9 | -57.6 | — | — |
| | 150 | 23 | 14106 | 14325 | 13883 | 23 | -64.7 | -59.2 | -70.0 | — | — |
| | 100 | 11 | 16518 | 16781 | 16414 | 11 | -72.8 | -66.0 | -77.0 | — | — |
| | 70 | 3 | 18647 | 18860 | 18500 | 3 | -70.4 | -70.0 | -70.7 | — | — |
| | 50 | 2 | 20889 | 20820 | 20559 | 2 | -64.6 | -59.5 | -69.8 | — | — |
| | 30 | 1 | 23935 | — | — | 1 | -57.7 | — | — | — | — |
| | 20 | — | — | — | — | — | — | — | — | — | — |
| | 10 | — | — | — | — | — | — | — | — | — | — |

N = The number of cases the element has been observed during the month.

* The atmospheric pressure corrected to the elevation of the radiosonde stations.

TABLE B 1 (contd.).—UPPER AIR CLIMATOLOGICAL DATA

MAY — 1964

| Station | Pressure Surface Millibar | Altitude of Pressure Surface (gpm) | | | | Temperature (°C) | | | | Dew Point (°C) | |
|------------------------|------------------------------|------------------------------------|---------------|---------------|---------------|------------------|-------|---------|--------|----------------|-------|
| | | N | Mean | Highest | Lowest | N | Mean | Highest | Lowest | N | Mean |
| Mersa Matruh 1200 U.T. | Surface | 31 | * 1012m.b. | * 1017m.b. | * 1006m.b. | 31 | 22.3 | 36.6 | 18.7 | 31 | 14.7 |
| | 1000 | 31 | 152 | 190 | 97 | 31 | 21.2 | 35.0 | 17.6 | 31 | 12.3 |
| | 850 | 31 | 1543 | 1594 | 1483 | 31 | 13.5 | 25.2 | 5.9 | 29 | 7.0 |
| | 700 | 31 | 3146 | 3216 | 3080 | 31 | 2.8 | 10.4 | — 3.9 | 24 | — 8.2 |
| | 600 | 31 | 4375 | 4459 | 4290 | 30 | — 5.7 | 0.8 | —11.8 | 20 | —11.7 |
| | 500 | 31 | 5783 | 5886 | 5658 | 31 | —15.3 | —11.2 | —22.1 | 17 | —23.9 |
| | 400 | 31 | 7426 | 7556 | 7259 | 31 | —27.7 | —23.4 | —34.8 | 6 | —29.4 |
| | 300 | 31 | 9427 | 9573 | 9270 | 31 | —42.8 | —39.3 | —48.2 | — | — |
| | 200 | 31 | 12069 | 12227 | 11927 | 31 | —56.4 | —46.8 | —64.0 | — | — |
| | 150 | 30 | 13886 | 14050 | 13768 | 30 | —57.6 | —52.0 | —64.2 | — | — |
| | 100 | 29 | 16421 | 16621 | 16288 | 29 | —61.5 | —56.8 | —66.5 | — | — |
| | 70 | 9 | 18592 | 18740 | 18050 | 9 | —60.6 | —57.0 | —61.9 | — | — |
| | 50 | 5 | 20798 | 20871 | 20681 | 5 | —55.6 | —54.1 | —57.5 | — | — |
| | 30 | 1 | 24188 | — | — | 1 | —47.0 | — | — | — | — |
| | 20 | — | — | — | — | — | — | — | — | — | — |
| | 10 | — | — | — | — | — | — | — | — | — | — |
| Helwan 1200 U.T. | Surface | 31 | * 996m.b. | * 1002m.b. | * 989m.b. | 31 | 29.6 | 41.5 | 20.1 | 31 | 3.5 |
| | 1000 | 31 | 113 | 158 | 52 | 7 | 26.3 | 29.4 | 23.8 | 7 | 4.6 |
| | 850 | 31 | 1518 | 1557 | 1464 | 31 | 15.5 | 28.2 | 6.5 | 31 | — 2.1 |
| | 700 | 31 | 3129 | 3184 | 3067 | 31 | 4.9 | 12.3 | — 5.6 | 24 | —10.8 |
| | 600 | 31 | 4366 | 4437 | 4267 | 31 | — 4.1 | 0.5 | —11.8 | 14 | —16.4 |
| | 500 | 31 | 5782 | 5867 | 5644 | 31 | —11.4 | —10.4 | —21.0 | 12 | —24.8 |
| | 400 | 31 | 7442 | 7543 | 7264 | 31 | —25.5 | —21.3 | —30.1 | 9 | —32.9 |
| | 300 | 31 | 9464 | 9593 | 9282 | 31 | —40.6 | —34.9 | —43.7 | — | — |
| | 200 | 31 | 12123 | 12264 | 11958 | 31 | —55.6 | —50.6 | —59.7 | — | — |
| | 150 | 31 | 13919 | 14089 | 13781 | 31 | —58.7 | —54.2 | —66.4 | — | — |
| | 100 | 28 | 16461 | 16633 | 16317 | 28 | —64.6 | —60.8 | —70.2 | — | — |
| | 70 | 26 | 18648 | 18800 | 18500 | 26 | —60.7 | —56.7 | —69.8 | — | — |
| | 50 | 22 | 20746 | 20925 | 20610 | 22 | —56.4 | —52.2 | —62.2 | — | — |
| | 30 | 13 | 24040 | 24270 | 23888 | 13 | —51.0 | —48.0 | —59.0 | — | — |
| | 20 | 8 | 26665 | 26843 | 26543 | 8 | —46.8 | —41.6 | —50.4 | — | — |
| | 10 | 1 | 31357 | — | — | 1 | —38.8 | — | — | — | — |
| Aswan 1200 U.T. | Surface | 30 | * 988m.b. | * 993m.b. | * 982m.b. | 30 | 35.1 | 45.3 | 20.4 | 30 | 8.7 |
| | 1000 | — | — | — | — | — | — | — | — | — | — |
| | 850 | 29 | 1520 | 1551 | 1492 | 29 | 20.9 | 31.0 | 13.3 | 18 | — 4.7 |
| | 700 | 30 | 3163 | 3204 | 3103 | 30 | 9.4 | 14.2 | 3.7 | 10 | — 9.7 |
| | 600 | 30 | 4422 | 4473 | 4351 | 30 | 1.3 | 6.6 | — 2.7 | 9 | —12.3 |
| | 500 | 30 | 5859 | 5962 | 5764 | 30 | —10.0 | — 4.4 | —12.9 | 8 | —22.0 |
| | 400 | 30 | 7477 | 7689 | 7178 | 30 | —21.2 | —15.2 | —26.6 | 2 | —35.4 |
| | 300 | 30 | 9614 | 9806 | 9444 | 30 | —34.4 | —27.2 | —39.0 | 1 | —40.8 |
| | 200 | 27 | 12342 | 12503 | 12177 | 27 | —52.5 | —48.7 | —55.3 | — | — |
| | 150 | 26 | 14324 | 14394 | 13958 | 26 | —61.8 | —53.6 | —67.7 | — | — |
| | 100 | 14 | 16616 | 16801 | 16351 | 14 | —69.4 | —65.5 | —71.2 | — | — |
| | 70 | 4 | 18793 | 18890 | 18730 | 4 | —67.0 | —63.5 | —75.1 | — | — |
| | 50 | — | — | — | — | — | — | — | — | — | — |
| | 30 | — | — | — | — | — | — | — | — | — | — |
| | 20 | — | — | — | — | — | — | — | — | — | — |
| | 10 | — | — | — | — | — | — | — | — | — | — |

N = The number of cases the element has been observed during the month.

* The atmospheric pressure corrected to the elevation of the radiosonde stations.

**TABLE B 2.—MEAN AND EXTREME VALUES OF THE FREEZING LEVEL AND THE TROPOPAUSE ;
THE HIGHEST WIND SPEED IN THE UPPER AIR**

MAY — 1964

| Station | Freezing Level | | | | | | | | | First Tropopause | | | | | | | | | Highest wind speed | | | | |
|-------------|----------------|----------------|----------------|----------------|----------------|----------------|-----------------|----------------|----------------|------------------|----------------|------------------|-----------------|----------------|------------------|-----------------|----------------|------------------|--------------------|----------------|----------------------|----------------|-----|
| | Mean | | | Highest | | | Lowest | | | Mean | | | Highest | | | Lowest | | | Altitude (g pm) | Pressure (mb.) | Direction (000-360)° | Speed in Knots | |
| | Altitude (gpm) | Pressure (mb.) | Dew point (°C) | Altitude (gpm) | Pressure (mb.) | Dew Point (°C) | Altitude (g pm) | Pressure (mb.) | Dew Point (°C) | Altitude (gpm) | pressure (mb.) | Temperature (°C) | Altitude (g pm) | Pressure (mb.) | Temperature (°C) | Altitude (g pm) | Pressure (mb.) | Temperature (°C) | | | | | |
| 0000 U.T. | (N) | (N) | (N) | | | | | | | (N) | (N) | (N) | | | | | | | | | | | |
| | M. Matruh . . | 3437 (31) | 676 (31) | -7.8 (24) | 4140 | 622 | -8.2 | 2100 | 794 | -4.6 | 11940 (29) | 189 (29) | -56.4 (29) | 14950 | 127 | -66.3 | 9600 | 284 | -47.3 | 14900 | 127 | 230 | 135 |
| | Helwan . . . | 3677 (31) | 656 (31) | -12.3 (20) | 4515 | 590 | — | 2270 | 771 | -4.4 | 12630 (30) | 188 (30) | -59.2 (30) | 16477 | 100 | -65.1 | 10570 | 246 | -53.9 | 14510 | 135 | 270 | 155 |
| Aswan . . . | 4316 (29) | 605 (29) | -12.6 (12) | 4830 | 569 | — | 3490 | 664 | -16.7 | 16058 (5) | 109 (5) | -72.1 (5) | 17250 | 92 | -75.2 | 14650 | 134 | -63.5 | 13270 | 169 | 270 | 128 | |
| 1200 U.T. | (N) | (N) | (N) | | | | | | | (N) | (N) | (N) | | | | | | | | | | | |
| | M. Matruh. . | 3394 (31) | 666 (31) | -9.6 (24) | 4370 | 606 | -6.8 | 2390 | 764 | -11.0 | 11930 (29) | 200 (29) | -57.5 (29) | 14230 | 143 | -64.8 | 8700 | 324 | -43.0 | 12230 | 197 | 280 | 175 |
| | Helwan . . . | 3751 (31) | 650 (31) | -11.6 (20) | 4490 | 596 | -11.6 | 2330 | 767 | -3.5 | 12039 (31) | 192 (31) | -58.7 (31) | 15430 | 117 | -63.8 | 10520 | 258 | -49.3 | 11610 | 216 | 280 | 150 |
| Aswan . . . | 4607 (30) | 577 (30) | -14.3 (10) | 5500 | 528 | -21.6 | 4080 | 622 | — | 15766 (9) | 119 (9) | -67.2 (9) | 18147 | 80 | -68.6 | 12050 | 206 | -54.7 | 12200 | 205 | 210 | 125 | |

N = The number of cases the element has been observed during the month.

TABLE B 3.—NUMBER OF OCCURRENCES OF WIND DIRECTION WITHIN SPECIFIED RANGES AND THE MEAN SCALAR WIND SPEED AT THE STANDARD AND SELECTED PRESSURE SURFACES.

MERSA MATRUH (A)—MAY 1964

| Time | Pressure Surface Millibar | Wind between ranges of direction (000—360)° | | | | | | | | | | | | | | | | | | | | Number of calm winds | Total number of observations (TN) | Mean scalar wind speed (knots) | | | | |
|--------------|------------------------------|---|-----------|-----------------|-----------|-----------------|-----------|-----------------|-----------|-----------------|-----------|-----------------|-----------|-----------------|-----------|-----------------|-----------|-----------------|-----------|-----------------|-----------|-------------------------|--------------------------------------|-----------------------------------|-----------------|-----------|-----------------|-----------|
| | | 345 / 014 | | 015 / 044 | | 045 / 074 | | 075 / 104 | | 105 / 134 | | 135 / 164 | | 165 / 194 | | 195 / 224 | | 225 / 254 | | 255 / 284 | | | | | 285 / 314 | | 315 / 344 | |
| | | N | (ff) m | N | (ff) m | N | (ff) m | N | (ff) m | N | (ff) m | N | (ff) m | N | (ff) m | N | (ff) m | N | (ff) m | N | (ff) m | | | | N | (ff) m | N | (ff) m |
| 0000 U.T. | Surface | 2 | 4 | 0 | — | 0 | — | 3 | 5 | 2 | 2 | 3 | 9 | 1 | 17 | 0 | — | 0 | — | 2 | 4 | 5 | 9 | 5 | 10 | 8 | 31 | 6 |
| | 1000 | 3 | 7 | 0 | — | 0 | — | 5 | 8 | 1 | 3 | 3 | 12 | 0 | — | 0 | — | 1 | 3 | 1 | 7 | 6 | 9 | 5 | 11 | 8 | 31 | 7 |
| | 850 | 0 | — | 0 | — | 0 | — | 0 | — | 2 | 28 | 0 | — | 2 | 12 | 4 | 15 | 2 | 18 | 2 | 12 | 9 | 20 | 10 | 24 | 0 | 31 | 20 |
| | 700 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 4 | 25 | 2 | 20 | 8 | 24 | 11 | 25 | 6 | 22 | 0 | 31 | 24 |
| | 600 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 1 | 40 | 4 | 24 | 7 | 30 | 14 | 29 | 5 | 32 | 0 | 31 | 29 |
| | 500 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 1 | 25 | 4 | 34 | 10 | 41 | 9 | 32 | 7 | 37 | 0 | 31 | 37 |
| | 400 | 1 | 25 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 4 | 51 | 12 | 42 | 7 | 46 | 5 | 45 | 0 | 29 | 46 |
| | 300 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 1 | 30 | 3 | 58 | 11 | 62 | 6 | 41 | 5 | 45 | 0 | 26 | 53 |
| | 200 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 2 | 36 | 7 | 53 | 2 | 72 | 3 | 45 | 0 | 14 | 56 |
| | 150 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 3 | 32 | 7 | 66 | 3 | 76 | 1 | 62 | 0 | 14 | 65 |
| | 100 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 1 | 39 | 1 | 135 | 2 | 28 | 0 | — | 0 | 4 | 62 |
| | 70 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| | 60 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| 50 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | |
| 40 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | |
| 30 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | |
| 20 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | |
| 10 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | |
| 1200 U.T. | Surface | 6 | 14 | 7 | 11 | 3 | 16 | 4 | 11 | 1 | 15 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 2 | 21 | 8 | 14 | 0 | 31 | 14 |
| | 1000 | 4 | 14 | 7 | 11 | 3 | 16 | 2 | 14 | 2 | 11 | 1 | 12 | 0 | — | 0 | — | 0 | — | 0 | — | 3 | 19 | 9 | 15 | 0 | 31 | 14 |
| | 850 | 1 | 22 | 1 | 19 | 1 | 11 | 0 | — | 0 | — | 2 | 6 | 1 | 23 | 1 | 24 | 3 | 16 | 6 | 14 | 9 | 19 | 6 | 19 | 0 | 31 | 17 |
| | 700 | 1 | 25 | 0 | — | 1 | 23 | 0 | — | 0 | — | 1 | 8 | 0 | — | 4 | 22 | 3 | 21 | 6 | 23 | 9 | 26 | 6 | 21 | 0 | 31 | 23 |
| | 600 | 0 | — | 0 | — | 0 | — | 1 | 17 | 0 | — | 0 | — | 0 | — | 2 | 26 | 4 | 22 | 9 | 23 | 12 | 29 | 3 | 28 | 0 | 31 | 26 |
| | 500 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 2 | 32 | 4 | 34 | 11 | 31 | 10 | 36 | 3 | 30 | 0 | 30 | 33 |
| | 400 | 1 | 40 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 1 | 36 | 8 | 39 | 9 | 42 | 7 | 43 | 2 | 38 | 0 | 28 | 41 |
| | 300 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 5 | 50 | 12 | 50 | 8 | 47 | 1 | 45 | 0 | 26 | 49 |
| | 200 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 7 | 46 | 5 | 78 | 9 | 61 | 1 | 44 | 0 | 22 | 60 |
| | 150 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 2 | 54 | 7 | 58 | 5 | 55 | 0 | — | 0 | 14 | 57 |
| | 100 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 2 | 50 | 0 | — | 0 | — | 0 | 2 | 50 |
| | 70 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| | 60 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| 50 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | |
| 40 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | |
| 30 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | |
| 20 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | |
| 10 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | |

N = The number of cases the element has been observed during the month.

TN = The total number of cases the wind has been observed for all directions during the month.

TABLE B 3 (contd.)—NUMBER OF OCCURRENCES OF WIND DIRECTION WITHIN SPECIFIED RANGES AND THE MEAN

SCALAR WIND SPEED AT THE STANDARD AND SELECTED PRESSURE SURFACES.

HELWAN—MAY 1964

| Time | Pressure Surface (Millibar.) | Wind between ranges of direction (000—360)° | | | | | | | | | | | | | | | | | | | | Number of Calm winds | Total Number of Observations (T.N) | Mean Sear wind Speed (Knots) | | | | |
|-----------|---------------------------------|---|-----------|-----------------|-----------|-----------------|-----------|-----------------|-----------|-----------------|-----------|-----------------|-----------|-----------------|-----------|-----------------|-----------|-----------------|-----------|-----------------|-----------|-------------------------|---------------------------------------|---------------------------------|-----------------|-----------|-----------------|-----------|
| | | 345 / 014 | | 015 / 044 | | 045 / 074 | | 075 / 104 | | 105 / 134 | | 135 / 164 | | 165 / 194 | | 195 / 224 | | 225 / 254 | | 255 / 284 | | | | | 285 / 314 | | 315 / 344 | |
| | | N | (ff) m | N | (ff) m | N | (ff) m | N | (ff) m | N | (ff) m | N | (ff) m | N | (ff) m | N | (ff) m | N | (ff) m | N | (ff) m | | | | N | (ff) m | N | (ff) m |
| 0000 U.T. | Surface | 4 | 8 | 6 | 12 | 17 | 12 | 2 | 8 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 2 | 31 | 10 |
| | 1000 | 1 | 8 | 1 | 5 | 4 | 10 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 1 | 7 | 8 |
| | 850 | 8 | 18 | 3 | 15 | 2 | 4 | 2 | 10 | 0 | — | 0 | — | 0 | — | 1 | 9 | 0 | — | 0 | — | 8 | 18 | 7 | 17 | 0 | 31 | 16 |
| | 700 | 5 | 16 | 0 | — | 0 | — | 1 | 11 | 0 | — | 0 | — | 0 | — | 0 | — | 1 | 31 | 6 | 23 | 11 | 18 | 7 | 22 | 0 | 31 | 20 |
| | 600 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 4 | 18 | 11 | 28 | 10 | 19 | 6 | 22 | 0 | 0 | 31 | 23 | |
| | 500 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 7 | 32 | 17 | 29 | 5 | 20 | 2 | 18 | 0 | 0 | 31 | 27 | |
| | 400 | 1 | 12 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 1 | 3 | 0 | — | 8 | 45 | 14 | 44 | 4 | 40 | 3 | 33 | 0 | 31 | 40 |
| | 300 | 0 | — | 0 | — | 0 | — | 1 | 3 | 0 | — | 0 | — | 0 | — | 1 | 28 | 7 | 74 | 19 | 54 | 0 | — | 2 | 44 | 0 | 30 | 55 |
| | 200 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 9 | 52 | 13 | 81 | 1 | 54 | 1 | 87 | 0 | 24 | 69 |
| | 150 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 5 | 54 | 6 | 59 | 1 | 62 | 1 | 99 | 0 | 13 | 61 |
| | 100 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 3 | 31 | 3 | 49 | 0 | — | 0 | — | 0 | 6 | 40 |
| | 70 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| | 60 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| | 50 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| 40 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | |
| 30 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | |
| 20 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | |
| 10 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | |
| 1200 U.T. | Surface | 11 | 10 | 2 | 10 | 2 | 19 | 0 | — | 1 | 15 | 0 | — | 0 | — | 2 | 13 | 2 | 13 | 2 | 16 | 4 | 13 | 4 | 9 | 1 | 31 | 12 |
| | 1000 | 2 | 11 | 0 | — | 1 | 20 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 2 | 13 | 2 | 9 | 0 | 7 | 12 |
| | 850 | 8 | 14 | 7 | 15 | 0 | — | 0 | — | 1 | 10 | 0 | — | 0 | — | 1 | 21 | 2 | 15 | 3 | 17 | 2 | 12 | 6 | 14 | 1 | 31 | 14 |
| | 700 | 3 | 29 | 2 | 14 | 2 | 14 | 0 | — | 0 | — | 0 | — | 2 | 14 | 1 | 29 | 2 | 18 | 5 | 9 | 13 | 17 | 1 | 10 | 0 | 31 | 16 |
| | 600 | 4 | 13 | 1 | 14 | 1 | 10 | 0 | — | 0 | — | 0 | — | 0 | — | 3 | 27 | 8 | 26 | 8 | 19 | 5 | 27 | 1 | 12 | 0 | 31 | 22 |
| | 500 | 1 | 12 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 2 | 15 | 12 | 30 | 8 | 30 | 7 | 24 | 1 | 16 | 0 | 31 | 27 |
| | 400 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 1 | 44 | 11 | 46 | 11 | 37 | 7 | 27 | 1 | 24 | 0 | 31 | 38 |
| | 300 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 1 | 18 | 0 | — | 10 | 77 | 17 | 53 | 3 | 54 | 0 | — | 0 | 31 | 60 |
| | 200 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 1 | 30 | 7 | 61 | 9 | 74 | 3 | 44 | 1 | 36 | 0 | 21 | 62 |
| | 150 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 4 | 87 | 8 | 49 | 2 | 46 | 0 | — | 0 | 14 | 60 |
| | 100 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 2 | 40 | 3 | 44 | 2 | 49 | 0 | — | 0 | 7 | 44 |
| | 70 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| | 60 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| | 50 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| 40 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | |
| 30 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | |
| 20 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | |
| 10 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | |

N = The number of cases the element has been observed during the month.

TN = The total number of cases the wind has been observed for all directions during the month.

TABLE B 3 (contd.)—NUMBER OF OCCURRENCES OF WIND DIRECTION WITHIN SPECIFIED RANGES AND THE MEAN SCALAR WIND SPEED AT THE STANDARD AND SELECTED PRESSURE SURFACES.

ASWAN (A)— MAY 1964

| Time | Pressure Surface (Millibar) | Wint between ranges of direction (000—360) | | | | | | | | | | | | | | | | | | | | Number of calm winds | Total number of observations (TN) | Mean Scalar wind Speed (Knots) | | | | |
|-----------|--------------------------------|--|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|------|-----|------|-----|------|-----|------|-------------------------|--------------------------------------|-----------------------------------|-----|------|-----|------|
| | | 345 | | 015 | | 045 | | 075 | | 105 | | 135 | | 165 | | 195 | | 225 | | 255 | | | | | 285 | | 315 | |
| | | / | | / | | / | | / | | / | | / | | / | | / | | / | | / | | | | | / | | / | |
| | | 014 | 044 | 074 | 104 | 134 | 164 | 194 | 224 | 254 | 284 | 314 | 344 | N | (ff) | N | (ff) | N | (ff) | N | (ff) | | | | N | (ff) | N | (ff) |
| | | m | m | m | m | m | m | m | m | m | m | m | m | m | m | m | m | m | m | m | m | m | m | m | m | m | | |
| 0000 U.T. | Surface | 17 | 13 | 0 | — | 0 | — | 4 | 9 | 0 | — | 0 | — | 0 | — | 0 | — | 1 | 10 | 0 | — | 4 | 12 | 3 | 29 | 11 | | |
| | 1000 | 0 | — | 6 | 12 | 2 | 12 | 2 | 12 | 0 | — | 1 | 26 | 0 | — | 1 | 9 | 0 | — | 2 | 11 | 3 | 6 | 12 | 16 | 0 | 29 | 13 |
| | 850 | 0 | — | 0 | — | 0 | — | 1 | 10 | 0 | — | 0 | — | 1 | 10 | 5 | 10 | 9 | 11 | 3 | 16 | 7 | 24 | 3 | 11 | 0 | 29 | 15 |
| | 700 | 1 | 25 | 0 | — | 1 | 26 | 0 | — | 0 | — | 0 | — | 2 | 22 | 12 | 20 | 9 | 23 | 4 | 22 | 0 | — | 0 | — | 0 | 29 | 22 |
| | 600 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 4 | 24 | 14 | 30 | 8 | 26 | 2 | 14 | 1 | 10 | 0 | — | 0 | 29 | 27 |
| | 500 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 1 | 29 | 6 | 30 | 10 | 40 | 9 | 36 | 3 | 15 | 0 | — | 0 | 29 | 34 |
| | 400 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 1 | 30 | 13 | 50 | 6 | 49 | 2 | 46 | 0 | — | 0 | 22 | 48 |
| | 300 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 1 | 30 | 13 | 50 | 6 | 49 | 2 | 46 | 0 | — | 0 | 22 | 48 |
| | 200 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 1 | 65 | 4 | 68 | 2 | 78 | 0 | — | 0 | — | 0 | 7 | 70 |
| | 150 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| | 100 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| | 70 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| | 60 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| | 50 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| 40 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | |
| 30 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | |
| 20 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | |
| 10 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | |
| 1200 U.T. | Surface | 16 | 11 | 0 | — | 0 | — | 1 | 5 | 1 | 4 | 0 | — | 1 | 5 | 2 | 12 | 0 | — | 2 | 9 | 2 | 14 | 4 | 13 | 1 | 30 | 10 |
| | 1000 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| | 850 | 5 | 7 | 0 | — | 3 | 7 | 0 | — | 1 | 8 | 1 | 5 | 1 | 3 | 2 | 12 | 0 | — | 6 | 16 | 1 | 8 | 10 | 13 | 0 | 30 | 11 |
| | 700 | 0 | — | 0 | — | 1 | 5 | 0 | — | 0 | — | 1 | 8 | 1 | 10 | 6 | 12 | 5 | 12 | 6 | 27 | 5 | 14 | 5 | 16 | 0 | 30 | 15 |
| | 600 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 1 | 20 | 6 | 14 | 8 | 26 | 6 | 23 | 5 | 20 | 0 | — | 3 | 29 | 19 |
| | 500 | 1 | 14 | 0 | — | 0 | — | 0 | — | 0 | — | 1 | 5 | 0 | — | 6 | 23 | 15 | 27 | 6 | 35 | 0 | 0 | 0 | — | 0 | 29 | 26 |
| | 400 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 6 | 27 | 15 | 34 | 6 | 39 | 1 | 35 | 1 | 32 | 0 | 29 | 33 |
| | 300 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 3 | 39 | 17 | 56 | 4 | 44 | 1 | 36 | 0 | — | 0 | 25 | 51 |
| | 200 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 3 | 87 | 6 | 77 | 3 | 62 | 1 | 49 | 0 | — | 0 | 13 | 74 |
| | 150 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 2 | 75 | 0 | — | 0 | 0 | — | — | 0 | 2 | 75 |
| | 100 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| | 70 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| | 60 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| | 50 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| 40 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | |
| 30 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | |
| 20 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | |
| 10 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | |

N — The number of cases the element has been observed during the month.

TN — The total number of cases the wind has been observed for all directions during the month.

REVIEW OF AGRO-METEOROLOGICAL STATION AT EL KASR

MAY 1964

Successive cold spells predominating. Extensive heat wave during most of the last week.

The first day of the month was a peak of a cold spell, when the lowest maximum air temperature in the screen (3.3°C below normal) and means of the day (4.1°C below normal), day-time and night-time occurred. On the following day, the absolute minima of air temperature at 2 metres (5.2°C below normal) and 5 cms above ground level, were recorded as well as those of soil temperature for the surface layers down to 200 cms of depth. The lowest values of evaporation from pan class A and Piche in the screen (3.6 mms below normal) were observed on the 3rd. Another lowest Piche evaporation and also the lowest vapour pressure deficit were reported on the 11 th.

The remarkable heat wave started on the 25th. and continued for the next four days with two peaks on the 27th. and 29th. The absolute maximum air temperature (13.5°C above normal), the highest values of the daily mean (7.0°C above normal), day time mean and those of soil temperatures for the surface layers down to 20 cms deep were associated with the first peak, together with the lowest relative humidity (53% below normal) and the highest water vapour deficit, whereas that of evaporation from pan class A and Piche happened on the previous day and the highest minimum air temperature at 5 cms was observed on the following day.

The second peak was characterized by the highest values of minimum air temperature (2.5°C above normal), and night time mean, as well as the lowest vapour pressure. An active cold front passed El Kasr late in the afternoon of that day giving rise to the highest daily mean of relative humidity (27% above normal) and vapour pressure in the evening and also a drop of 12.5°C in the maximum air temperature on the next day.

The daily means of air temperature and Piche evaporation were slightly below normal by 0.7°C and 0.9 mm, while that of relative humidity was above by 1% .

The actual duration of bright sunshine was 324.6 hours or 77% of the possible duration and the total amount of rainfall was less than normal by 3.5 mms.

REVIEW OF AGRO-METEOROLOGICAL STATION AT TAHRIR

MAY 1964

Cool and steady with extreme air temperatures below the average for most of the days. Khamsin conditions with an extensive heat wave prevailed during the last week.

The month started with a peak of a cold spell, associated with the lowest values of the daily mean of air temperature in the screen, the absolute minima of the air at 5 cms above the ground and soil temperatures for depths 2 to 200cms, whereas those of the surface layer were observed on the 2 nd. together with the absolute minimum and the lowest night time mean of air temperature at 2 metres. The lowest values of evaporation from pan class A and Piche in the screen and in the free air at 1, 60 and 120 cms. above ground level occurred on the next day. and also the highest relative humidity at 1200 U.T.

Another cold spell began on the 8 th. and gave rise on the following day to the lowest values of maximum and day time mean of air temperature together with the daily mean and 1200 U.T. vapour pressure.

The intense heat wave had its peak with the absolute maximum of air temperature on the 28th. and 29th. (42.9°C), when the highest values of soil temperatures for the surface layers down to 20 cms of depth were observed. On the first day the lowest values of mean relative humidity and that at 1200 U.T. were reported, whereas the highest values of the daily and day time means happened on the second day. No material change in the maximum air temperature took place on the following day, but the highest values of the minimum and night time mean occurred as well as those of evaporation.

The maximum air temperature fell 2°C on the last day of the month when the vapour pressure attained its highest value.

The daily means of air temperature, relative humidity, wind speed at 2 metres, vapour pressure and evaporation from pan class A and Piche were all less than those of last year by amounts 0.9°C , 3 %, 0.3m/sec , 0.6, 0.11 and 1.8 mms respectively.

On the other hand the actual sunshine duration and total radiation were more by 56 hours and 1700 langleys. With regard to the extreme soil temperature, the maximum was higher by 6.9°C at 1 cm, decreasing gradually by increasing depth and vanished at about 1 metre, whereas the minimum was lower by 3.1°C at 1 cm and became 0.7°C at 50 cms.

REVIEW OF AGRO-METEOROLOGICAL STATION AT GIZA

MAY 1964

Mainly mild with successive cold spells. Very hot during the last week.

A peak of a cold spell took place on the first day of the month giving the absolute minima of air temperature at 5 and 200 cms above the ground (4°C below normal) together with those of soil temperature for the surface layer down to 20 cms of depth in the dry, wet and grass fields and also the lowest vapour pressure deficit. The cooling extended to 50 cms of depth in the three fields on the following day and gave rise to the lowest Piche evaporation in the free air at 120 cms above ground level while the lowest values of soil temperatures at 100 cms in the dry and wet fields and of Piche evaporation in the screen (1.2 mms below normal) and in the free air at 60 cms occurred on the 3 rd. For the grass field and Piche at 1 cm, the lowest values were observed on the next day.

The peak of the second cold spell was on the 8 th., when the lowest maximum air temperature (6.2°C below normal) was reported while the lowest values of the daily mean (6.5 below normal) and day time mean as well as that of pan class A evaporation were observed on the following day. Another absolute minimum of air temperature was reported on the 10 th. and also the lowest night time mean.

The highest daily mean of relative humidity (10% above normal) was associated with the third cold spell and happened on the 14th.

The intense heat wave started on the 26 th., with the peak (43.7°C , 10.0°C above normal) on the 30 th., when the highest values of Piche evaporation in the free air and screen (13.1 mms above normal) and soil temperatures for the surface layers down to 20 cms of depth in the grass field and the layer of thickness 5 to 10 cms in the dry field

were recorded as well as the lowest relative humidity (42% below normal) and the daily mean (26% below normal) and also vapour pressure. The highest values of pan class A evaporation, soil temperature for the first two cms in the dry field and the surface layers to 20 cms of depth in the wet field and vapour pressure deficit occurred on the previous day, whereas for soil temperature at 50 cms of depth in the three fields took place on the last day of the month.

Compared with the normal values, the daily means of air temperature and relative humidity were lower by 1.1°C and 1% respectively, while that for Piche evaporation in the screen was higher by 3.0 mms.

The highest values of soil temperatures in the three fields were generally higher than last year by about 4 to 5 °C in the surface layer decreasing gradually with increasing depth and vanishing at about 1 metre. With respect to the lowest values, they were less by variable amounts not exceeding 3°C.

REVIEW OF AGRO-METEOROLOGICAL STATION AT KHARGA

MAY 1964

Mainly mild and dry with successive cold spells causing the dropping of temperature to below normal in most of the days, but extremely hot and dry during the last four days.

The first day of the month was a peak of a cold wave, when the lowest vapour pressure and the absolute soil temperatures for the depths 20 and 200 cms. were observed, whereas those for the depths 10, 50, and 100 cms, the highest relative humidity (20% above normal) and the lowest vapour pressure deficit occurred on the following day. Also the lowest values of evaporation from pan class A and Piche in the free air at levels 1, 60 and 120 cms. above ground level and in the screen were reported on the 5th.

The most pronounced cold spell started on the 7th with the peak on the 10th, when the lowest maximum air temperature (7.5°C below normal), the absolute minima at 5, 20 and 200 cms. (6.4°C below normal), the lowest means of the day (6.5°C below normal), night time and day time and the absolute minima of soil temperature for the surface layer down to 5 cms. of depth were recorded.

The extensive heat wave started on the 26th, when the highest values of evaporation from pan class A and Piche in the free air and the screen (29.4 mms. above normal) were observed with gradual rise in temperature to the last day of the month, when the absolute maximum air temperature (7.9°C above normal) and the highest values of the means for the day (6.4°C above normal), day time and night time occurred as well as the absolute maxima of soil temperatures for the surface layers down to 1 metre of depth and the highest water vapour deficit (68.4 mms.).

During the last three days of the month, the lowest relative humidity 7% (26% below normal) was reported, while the highest minima of air temperature at 5, 20 and 200 cms. (3.9°C above normal) were recorded on the 28th.

Compared with the normal values of mean air temperature and relative humidity this month was below normal by 1.2°C and 9% respectively while the mean Piche evaporation in the screen was 10.5 mms. above.

The sunshine duration was 385.3 hours (93.1% from the possible duration).

TABLE C 1.—AIR TEMPERATURE AT 2 METRES ABOVE GROUND

MAY — 1964

| STATION | Air Temperature (°C) | | | | | Mean Duration in hours of daily air temperature above the following values. | | | | | | | | | | | |
|---------------|----------------------|--------------|-----------------------|-----------------------|---------------------|--|------|------|------|------|------|------|------|------|------|------|--|
| | Mean Max. | Mean Min. | Mean of the day | Night time mean | Day time mean | -5°C | 0°C | 5°C | 10°C | 15°C | 20°C | 25°C | 30°C | 35°C | 40°C | 45°C | |
| El Kaer | 24.4 | 13.4 | 19.3 | 16.9 | 21.3 | 24.0 | 24.0 | 24.0 | 24.0 | 20.0 | 9.7 | 1.9 | 0.4 | 0.1 | 0.0 | 0 | |
| Tahrir | 31.2 | 14.4 | 22.2 | 18.2 | 25.2 | 24.0 | 24.0 | 24.0 | 24.0 | 21.0 | 13.7 | 7.7 | 2.8 | 1.3 | 0.4 | 0 | |
| Giza | 31.5 | 14.8 | 23.3 | 19.9 | 25.6 | 24.0 | 24.0 | 24.0 | 24.0 | 21.2 | 14.7 | 8.3 | 3.1 | 1.4 | 0.4 | 0 | |
| Kharga | 35.4 | 19.4 | 27.9 | 24.6 | 30.4 | 24.0 | 24.0 | 24.0 | 24.0 | 24.0 | 22.3 | 15.8 | 8.5 | 2.5 | 0.9 | 0 | |

TABLE C 2.—ABSOLUTE VALUES OF AIR TEMPERATURE AT 2 METRES ABOVE GROUND, ABSOLUTE MINIMUM AIR TEMPERATURE AT 5cms ABOVE GROUND OVER DIFFERENT FIELDS.

MAY — 1964

| STATION | Max. Temp. at 2 metres (°C) | | | | Min. Temp. at 2 metres (°C) | | | | Min. Temp. at 5 cms. above (°C) | | | |
|---------------|-----------------------------|-------|--------|------|-----------------------------|------|--------|------|---------------------------------|------|-------|------|
| | Highest | | Lowest | | Highest | | Lowest | | Dry soil | | Grass | |
| | Value | Date | Value | Date | Value | Date | Value | Date | Value | Date | Value | Date |
| El Kaer | 39.1 | 27 | 20.3 | 1 | 19.3 | 29 | 9.1 | 2 | 6.7 | 2 | — | — |
| Tahrir | 42.9 | 28.29 | 24.6 | 9 | 21.6 | 30 | 10.0 | 2 | 7.4 | 1 | — | — |
| Giza | 43.7 | 30 | 25.3 | 8 | 21.6 | 31 | 9.6 | 1.10 | 5.4 | 1 | 3.3 | 1 |
| Kharga | 46.2 | 31 | 29.2 | 9.10 | 25.9 | 28 | 13.8 | 10 | 10.8 | 10 | — | — |

TABLE C 3.—(SOLAR+SKY) RADIATION, DURATION OF BRIGHT SUNSHINE, RELATIVE HUMIDITY, VAPOUR PRESSURE AT 2 METRES ABOVE GROUND, EVAPORATION & RAINFALL.

MAY — 1964

| STATION | (Solar+Sky) Radiation gm. cal/cm² | Duration of Bright Sunshine (hours) | | | Relative Humidity. % | | | | | | Vapour pressure (mms) | | | | | | Evaporation (mms) | | Rainfall (mms) | |
|---------|-----------------------------------|-------------------------------------|------------------------|----|----------------------|-------|-------------|-----------|--------|----------|-----------------------|---------|---------|------|--------|------|-------------------|-------------|----------------------|----------------------|
| | | Total Actual monthly | Total Possible monthly | % | Duration in hours | | Mean of day | 1200 U.T. | Lowest | Date | Mean of day | 1200 UT | Highest | Date | Lowest | Date | Piche | Pan class A | Total Amount Monthly | Max. Fall in one day |
| | | | | | > 90% | > 80% | | | | | | | | | | | | | | |
| El Kaer | 565.4 | 324.6 | 426.1 | 76 | — | — | 72 | 63 | 18 | 27 | 12.4 | 13.0 | 16.6 | 31 | 7.8 | 24 | — | 6.46 | 0.1 | 0.1 |
| Tahrir | 655.9 | 373.0 | 424.7 | 88 | 1.2 | 4.7 | 55 | 28 | 8 | 29 | 9.9 | 8.4 | 16.6 | 31 | 5.1 | 29 | 18.6 | 11.85 | 0.0 | — |
| Giza | 645.1 | 363.4 | 423.7 | 86 | 0.1 | 2.6 | 49 | 26 | 8 | 30 | 9.3 | 7.8 | 15.8 | 31 | 4.7 | 30 | 19.1 | 11.52 | 0.0 | — |
| Kharga | 612.1 | 384.3 | 414.0 | 93 | 0 | 0 | 23 | 15 | 7 | 29.30.31 | 6.0 | 5.8 | 9.8 | 21 | 3.4 | 1 | 35.4 | 19.26 | 0.0 | — |

*Printed at the General Organisation
for Government Printing Offices, Cairo
Under-Secretary of State*

ALY SULTAN ALY
Chairman of the Board of Directors

no Br



UNITED ARAB REPUBLIC

MONTHLY WEATHER REPORT

VOLUME 7

NUMBER 6

JUNE, 1964

RECEIVED
JUN 10 1964
U. S. DEPT. OF COMMERCE
METEOROLOGICAL DEPARTMENT

U.D.C. 551, 508,1 (62)

MINISTRY OF SCIENTIFIC RESEARCH—METEOROLOGICAL DEPARTMENT
CAIRO

PUBLICATIONS OF THE METEOROLOGICAL DEPARTMENT OF THE UNITED ARAB REPUBLIC—CAIRO

In fulfilment of its duties as the National Meteorological service for the U.A.R., the Meteorological Department issues several reports and publications on weather, climate and agrometeorology. The principal publications are described on this page.

Orders for publications should be addressed to :

"The Director General, Meteorological Department, Kubri-el-Qubbeh—CAIRO".

THE DAILY WEATHER REPORT

This report is printed daily in the Meteorological Department. It contains surface and upper air observations carried by the relevant networks of the Republic and made at the four main synoptic hours of observations (00, 06, 12 and 18 U.T.); as well as ship observations over the Eastern Mediterranean and north Red Sea made at the same times.

It also contains two surface synoptic charts at 00 and 12 U.T. and two upper air charts for the standard isobaric surfaces 700 & 500 mbs. at both 00 and 12 U.T.

In compliance with resolution 8 (EC-XIII) of WMO, foreign upper air data included in Cairo Subregional Broadcast are also given in this report.

THE MONTHLY WEATHER REPORT

First issued in 1909, the Monthly Weather Report served to give a brief summary of the weather conditions that prevailed over Egypt during the month, with a table showing the mean values for few meteorological elements and their deviations from the normal values. From 1954 to 1957 this report was in a rapid state of development and extension resulting into a voluminous report on January 1958 giving surface, upper air, and agro-meteorological data for U.A.R.

THE AGRO-METEOROLOGICAL ABRIDGED MONTHLY REPORT

Gives a review of weather experienced in the agro-meteorological stations of the U.A.R. as well as monthly values of certain elements.

THE ANNUAL REPORT

This report gives annual values and statistics for the various meteorological elements, together with a summary of the weather conditions that prevailed during all months of the year .

CLIMATOLOGICAL NORMALS FOR EGYPT

The normals, long averages and statistical data are given in one edition for stations in Egypt from the date of opening of each station up to 1945, A new voluminous edition was issued in March 1968 which brings normals and mean values up till 1960.



UNITED ARAB REPUBLIC

MONTHLY WEATHER REPORT

VOLUME 7

NUMBER 6

JUNE, 1964

U.D.C. 551, 506,1 (62)

**MINISTRY OF SCIENTIFIC RESEARCH — METEOROLOGICAL DEPARTMENT
CAIRO**

CONTENTS

PAGE

| | |
|---|-----|
| General Summary of Weather Conditions | 1-2 |
|---|-----|

SURFACE DATA

| | |
|---|------|
| ble A1.—Monthly values of the Atmospheric Pressure, Air Temperature, Relative Humidity, Bright Sunshine Duration and Piche Evaporation | 3 |
| , A2.—Maximum and Minimum Air Temperatures | 4 |
| , A3.—Sky Cover and Rainfall | 5 |
| , A4.—Number of Days of Occurrence of Miscellaneous Weather Phenomena | 6 |
| , A.5.—Number in Hours of Occurrences of Concurrent Surface Wind Speed and Direction Recorded Within Specified Ranges | 7, 8 |

UPPER AIR DATA

| | |
|--|-------|
| ble B1.—Monthly Means and Monthly Absolute Higher & Lower Values of Altitude, air Temperature & Dew point at Standard and Selected Pressure Surface | 9, 10 |
| , B2.—Mean and Extreme values of The Freezing Level and The Tropopause; The Highest Wind Speed in The Upper Air | 11 |
| , B3.—Number of Occurrenceces of Wind Direction Within Specified Ranges and The Mean Scalar Wind Speed at the Standard and Selected Pressure Surfaces | 12-14 |

AGRO-METEOROLOGICAL DATA

| | |
|---|-------|
| Reviews of Agro-meteorological stations | 15-17 |
| able C1.—Air Temperature at 2 Metres Above Ground | 18 |
| , C2.—Aboslute Values of Air Temperature at 2 Metres Above Ground, Absolute Minimum Air Tempereture at 5 Cms Above Ground Over Different Fields. | 18 |
| , C3.—(Solar + Sky) Radiation, Duration of Bright Sunshine, Relative Humidity and Vapour Pressure at 2 Metres Above Ground, Evaporation and Rainfall | 18 |
| , C4.—Extreme Soil Temperature at Different Depths in Different Fields | 19 |
| , C5.—Surface wind | 19 |

GENERAL SUMMARY OF WEATHER CONDITIONS

JUNE 1964

Generally mild and humid in the northern parts, hot and rather humid in the middle parts, excessively hot and dry in the southern parts. A prevailing excessive heat wave during the 2nd week.

GENERAL DESCRIPTION OF WEATHER

The prevailing weather was generally of the common summer type, mild and humid in the northern parts, hot in the middle parts and excessively hot in the southern parts. Excessive temperatures have been experienced between the 9th & 12th, due to the prevalence of a pronounced heat wave.

Light showers fell over few scattered parts of the Mediterranean district during the second week. Early morning mist developed, in few occasions over scattered parts of Lower Egypt and in large occasions over western parts of Cairo area district. Rising sand occurred during few days over scattered parts.

PRESSURE DISTRIBUTION

The prevailing pressure distributions over the surface map this month can be summarized in the following pressure systems.

- Anticyclonic ridge over SW Russia (Caspian & Black Sea areas).
- Anticyclonic ridge extending from the Azores through west Mediterranean and Europe.
- Complex monsoon low pressure system over Iraq, Arabia & Sudan.
- Thermal low over Great Sahara of Africa.
- The travelling deep low pressure system of north Atlantic.

On the other hand both the 700 & 500 mb charts were characterized by a high pressure belt extending south of latitude 35°N and two deep upper troughs to its north, one stretched over West Europe and the other stretched over West Russia.

The complex monsoon over Iraq, Arabia and Sudan showed a marked gradual NW displacement on the 5th by the approach of a deep Atlantic low pressure system from Central Europe. On the 8th its western arm penetrated Greece and thermal shallow lows developed accordingly over Western Desert and Cyrenica Mediterranean coastal strip.

On the 12th a second Atlantic depression penetrated Spain and accordingly the complex monsoon of the Middle East showed an additional northwest elongation.

On the 19th, a third Atlantic depression approached Central Europe and the Mediterranean was a loose pressure gradient area. As a result the complex monsoon of Iraq, Arabia and Sudan showed a marked gradual NW displacement through East Mediterranean up till the 23rd.

On the 29th, a deep northern trough of low pressure penetrated north of the Black Sea. Accordingly the complex monsoon over Iraq, Arabia & Sudan showed a marked north-west elongation towards East Mediterranean and northern vicinities, where thermal cells developed on the 30th.

Apart from these four NW elongations, the normal pressure distribution over the surface map predominated.

The subtropical jet stream oscillated over the U.A.R. during this month at about 180 mb level.

The highest wind speeds recorded at Mersa Matruh, Helwan & Aswan were 150, 148 & 135 knots on the 19th, 8th & 2nd respectively.

SURFACE WIND

The prevailing surface winds were light/moderate Nly in general. Fresh/strong winds blew during daytime intervals in few days over scattered localities in the Republic.

Gales were reported at: Fayed on the 12th.

TEMPERATURE

Four heat waves of short durations were experienced, one of which with its peak round the 12th was excessive.

Maximum air temperature was remarkably above normal during the excessive heat wave,

slightly to moderately above normal during the other heat waves and slightly below normal the rest of the month.

The absolute maximum temperature for the Republic was 46.9°C reported at Kom Ombo on the 13th.

Minimum air temperature fluctuations were irregular. In general, it oscillated round normal in the northern parts, above normal in the middle parts and below normal in the southern parts, its departures from normal were slight to moderate.

The absolute minimum temperature for the Republic was 12.3°C reported at El Kasr on the 2nd.

PRECIPITATION

This month was almost rainless with the exception of light showers over few scattered localities in the Mediterranean district between the 9th & 12th.

The absolute daily rainfall was 0.4 mm. reported at Sidi Barrani on the 10th, which was also the absolute monthly rainfall for this month.

Cairo, 19 / 8 / 1970

M. F. TAHA
Under Secretary of State
Director General
Meteorological Department

**TABLE A 1.—MONTHLY VALUES OF THE ATMOSPHERIC PRESSURE, AIR TEMPERATURE,
RELATIVE HUMIDITY, BRIGHT SUNSHINE DURATION & PICHE EVAPORATION**

JUNE — 1964

| STATION | Atmospheric Pressure (mbs) M.S.L | | Air Temperature °C | | | | | | | | | | Relative Humidity % | | Bright Sunshine Duration (Hours) | | | Piche Evaporation mms. Mean |
|--------------------|--|-----------------------------|--------------------|-----------------------------|-------------|-----------------------------|----------|----------|-----------------------------|----------|-----------------------------|------|-----------------------------|-----------------|-------------------------------------|------|-------|--------------------------------|
| | | | Maximum | | Minimum | | A+B 2 | Dry Bulb | | Wet Bulb | | | | | | | | |
| | Mean | D.F Normal or Average | (A) Mean | D.F Normal or Average | (B) Mean | D.F Normal or Average | | Mean | D.F Normal or Average | Mean | D.F Normal or Average | Mean | D.F Normal or Average | Total Actual | Total Possible | % | | |
| Sellum | 1010.8 | —2.5 | 28.7 | —0.6 | 20.9 | +0.5 | 24.8 | 24.8 | +0.6 | 19.8 | +0.2 | 61 | 0 | — | — | — | 10. 1 | |
| Mersa Matruh (A) | 1011.1 | —1.7 | 27.8 | 0.0 | 18.1 | —0.1 | 23.0 | 23.1 | —0.1 | 19.3 | —0.4 | 68 | — 2 | 369.5 | 425.4 | 86.9 | 8. 6 | |
| Alexandria . (A) | 1010.2 | —1.5 | 29.5 | +1.3 | 20.1 | —0.1 | 24.8 | 24.2 | 0.0 | 20.2 | —0.3 | 68 | — 4 | 366.5 | 424.1 | 86.4 | 8. 7 | |
| Port Said . . (A) | 1009.4 | —1.7 | 28.3 | —0.2 | 21.8 | —0.6 | 25.0 | 24.8 | —0.1 | 20.9 | —0.5 | 69 | — 3 | 348.0 | 424.1 | 82.0 | 5. 3 | |
| El Arish | 1009.5 | —1.4 | 29.2 | +0.4 | 19.6 | +0.9 | 24.4 | 24.4 | —0.3 | 21.1 | 0.0 | 73 | + 2 | 375.1 | 424.2 | 88.4 | 5. 5 | |
| Ghazza. | 1009.2 | —1.3 | 26.7 | —0.4 | 19.7 | +0.3 | 22.3 | 23.5 | —0.4 | 20.4 | —0.7 | 74 | — 2 | 336.4 | 425.4 | 79.1 | 4. 9 | |
| Tanta | 1008.9 | — | 34.0 | — | 18.7 | — | 26.4 | 25.8 | — | 20.2 | — | 58 | — | 364.9 | 422.4 | 86.4 | 8. 4 | |
| Cairo (A) | 1009.3 | —1.7 | 34.6 | +0.1 | 20.7 | +0.8 | 27.6 | 27.1 | +0.1 | 19.3 | —0.4 | 45 | — 3 | — | — | — | 18.8 | |
| Fayoum | 1008.7 | — | 35.7 | — | 20.1 | — | 27.9 | 27.8 | — | 19.6 | — | 42 | — | — | — | — | 12.2 | |
| Minya (A) | 1008.5 | —1.4 | 36.1 | +0.5 | 19.3 | +0.5 | 27.7 | 27.9 | +0.4 | 19.3 | +0.4 | 41 | 0 | — | — | — | 12.4 | |
| Amyout (A) | 1008.2 | —0.8 | 37.1 | —0.3 | 21.8 | +0.5 | 29.4 | 29.8 | +0.3 | 18.0 | —0.1 | 26 | — 1 | — | — | — | 23.5 | |
| Luxor (A) | 1006.1 | —0.7 | 40.0 | —0.7 | 22.6 | 0.0 | 31.3 | 31.9 | —0.5 | 19.1 | —0.1 | 25 | + 3 | — | — | — | 15.3 | |
| Aswan (A) | 1006.1 | +0.1 | 40.6 | —1.6 | 23.9 | —1.2 | 32.2 | 32.7 | —1.2 | 17.2 | —0.2 | 13 | + 1 | — | — | — | 23.2 | |
| Siwa. | 1010.2 | —2.1 | 37.3 | +0.2 | 20.3 | +1.1 | 28.8 | 29.3 | —0.5 | 18.1 | —1.3 | 28 | — 5 | — | — | — | 18.6 | |
| Bahariya | 1009.4 | —1.3 | 36.7 | —0.2 | 20.2 | +0.6 | 28.4 | 29.0 | 0.0 | 18.0 | —0.5 | 29 | — 3 | — | — | — | 11.8 | |
| Farafra | 1010.7 | — | 37.1 | — | 19.1 | — | 28.1 | 28.6 | — | 16.7 | — | 24 | — | — | — | — | 24.8 | |
| Dakhla | 1007.6 | —0.3 | 38.3 | +0.1 | 20.1 | —2.4 | 29.2 | 30.4 | —0.8 | 17.0 | —0.4 | 19 | 0 | — | — | — | 22.8 | |
| Kharga | 1007.9 | — | 38.7 | — | 22.9 | — | 30.8 | 31.4 | — | 17.1 | — | 17 | — | 383.0 | 409.7 | 93.5 | 33.8 | |
| Tor | 1006.0 | —1.1 | 33.6 | +0.2 | 24.5 | +1.3 | 29.0 | 27.9 | +0.5 | 21.2 | —0.4 | 53 | — 5 | — | — | — | 11.1 | |
| Hurghada | 1006.1 | —0.5 | 33.1 | +1.7 | 23.4 | —0.1 | 28.2 | 28.7 | +0.4 | 19.9 | —0.6 | 41 | — 5 | — | — | — | 23.9 | |
| Quseir | 1006.6 | —0.4 | 31.4 | —1.0 | 25.1 | —0.3 | 28.2 | 28.7 | —0.7 | 20.4 | —0.6 | 44 | — 1 | — | — | — | 20.4 | |

TABLE A 2. MAXIMUM AND MINIMUM AIR TEMPERATURES

JUNE 1964

| STATION | Maximum Temperature °C | | | | | | | | | Grass Min. Temps. | | Minimum Temperature °C | | | | | | | | |
|-------------------|------------------------|------|--------|------|----------------------------|-----|-----|-----|-----|-------------------|----------------|------------------------|-------|--------|------|-----------------------------|-----|-----|------|--|
| | Highest | Date | Lowest | Date | No. of Days with Max-Temp. | | | | | Mean | D. From Normal | Highest | Date | Lowest | Date | No. of Days with Min. Temp. | | | | |
| | | | | | >25 | >30 | >35 | >40 | >45 | | | | | | | <10 | < 5 | < 0 | <- 5 | |
| | | | | | | | | | | | | | | | | | | | | |
| Sallum | 35.4 | 19 | 25.5 | 14 | 30 | 13 | 1 | 0 | 0 | 20.1 | — | 24.6 | 11 | 16.8 | 1 | 0 | 0 | 0 | 0 | |
| Mersa Matruh. (A) | 35.6 | 30 | 24.2 | 1 | 27 | 5 | 0 | 0 | 0 | — | — | 22.3 | 20 | 14.2 | 1 | 0 | 0 | 0 | 0 | |
| Alexandria (A) | 41.0 | 12 | 25.4 | 1 | 30 | 7 | 2 | 1 | 0 | — | — | 22.8 | 22 | 15.8 | 2 | 0 | 0 | 0 | 0 | |
| Port Said (A) | 31.8 | 6 | 25.2 | 3 | 30 | 7 | 0 | 0 | 0 | 21.4 | — | 23.6 | 12 | 19.1 | 2 | 0 | 0 | 0 | 0 | |
| El Arish | 35.2 | 12 | 26.4 | 3 | 30 | 7 | 1 | 0 | 0 | 18.3 | — | 21.8 | 13 | 16.5 | 5 | 0 | 0 | 0 | 0 | |
| Ghazza | 28.8 | 12 | 24.5 | 2 | 28 | 0 | 0 | 0 | 0 | 17.8 | — | 21.5 | 13 | 16.3 | 4 | 0 | 0 | 0 | 0 | |
| Tanta | 43.2 | 12 | 31.3 | 27 | 30 | 30 | 9 | 1 | 0 | — | — | 21.3 | 23 | 14.8 | 12 | 0 | 0 | 0 | 0 | |
| Cairo (A) | 43.8 | 12 | 30.9 | 17 | 30 | 30 | 10 | 1 | 0 | — | — | 23.8 | 12 | 18.3 | 8 | 0 | 0 | 0 | 0 | |
| Fayoum | 44.0 | 12 | 33.0 | 16 | 30 | 30 | 12 | 3 | 0 | 17.7 | — | 22.4 | 12 | 18.0 | 4 | 0 | 0 | 0 | 0 | |
| Minya (A) | 44.9 | 12 | 32.9 | 8 | 30 | 30 | 21 | 2 | 0 | 16.8 | — | 23.5 | 13 | 16.0 | 2 | 0 | 0 | 0 | 0 | |
| Assyout (A) | 44.7 | 12 | 33.5 | 8 | 30 | 30 | 23 | 4 | 0 | 20.1 | — | 25.6 | 12 | 19.8 | 2,19 | 0 | 0 | 0 | 0 | |
| Luxor (A) | 44.2 | 12 | 37.0 | 15 | 30 | 30 | 30 | 14 | 0 | — | — | 25.5 | 13 | 20.0 | 10 | 0 | 0 | 0 | 0 | |
| Aswan (A) | 45.0 | 1 | 37.4 | 17 | 30 | 30 | 30 | 18 | 0 | — | — | 27.4 | 13 | 22.2 | 10 | 0 | 0 | 0 | 0 | |
| Siwa | 43.5 | 11 | 33.7 | 13 | 30 | 30 | 24 | 6 | 0 | 18.8 | — | 25.2 | 11 | 15.7 | 1 | 0 | 0 | 0 | 0 | |
| Bahariya | 42.1 | 11 | 33.1 | 16 | 30 | 30 | 23 | 5 | 0 | 18.9 | — | 23.4 | 12 | 17.7 | 4 | 0 | 0 | 0 | 0 | |
| Farafra | 43.4 | 11 | 33.4 | 8 | 30 | 30 | 24 | 4 | 0 | 18.3 | — | 22.9 | 12 | 15.0 | 2 | 0 | 0 | 0 | 0 | |
| Dakhla | 46.4 | 12 | 35.2 | 4 | 30 | 30 | 30 | 6 | 1 | 15.9 | — | 26.8 | 20 | 15.6 | 10 | 0 | 0 | 0 | 0 | |
| Kharga | 45.6 | 12 | 36.2 | 16 | 30 | 30 | 30 | 7 | 1 | 21.3 | — | 28.7 | 21 | 17.4 | 9 | 0 | 0 | 0 | 0 | |
| Tor | 40.0 | 7 | 29.1 | 16 | 30 | 28 | 3 | 0 | 0 | — | — | 25.6 | 14,15 | 20.2 | 6 | 0 | 0 | 0 | 0 | |
| Furghada | 38.4 | 12 | 30.3 | 28 | 30 | 30 | 3 | 0 | 0 | — | — | 26.7 | 14 | 20.6 | 6 | 0 | 0 | 0 | 0 | |
| Quseir | 35.8 | 21 | 28.6 | 4 | 30 | 25 | 3 | 0 | 0 | — | — | 29.0 | 13 | 22.4 | 10 | 0 | 0 | 0 | 0 | |

TABLE A 3.—SKY COVER AND RAINFALL

JUNE — 1964

| Station | Mean Sky Cover (Oct) | | | | | Rainfall (mms) | | | | | | | | | | | |
|----------------------------|----------------------|------------|------------|------------|---------------|-----------------|---------------------|-------------------------|-------|------------------------------------|------|------|------|-----|-----|-----|--|
| | 00 U.T. | 06 U.T. | 12 U.T. | 18 U.T. | Daily Mean | Total Amount | Dev. From Normal | Max. Fall in one day | | Number of days with Amount of Rain | | | | | | | |
| | | | | | | | | Amount | Date | <0.1 | ≥0.1 | ≥1.0 | ≥5.0 | ≥10 | ≥25 | ≥50 | |
| | | | | | | | | | | | | | | | | | |
| Sallum | 0.6 | 1.5 | 1.5 | 1.2 | 1.1 | Tr. | +Tr. | Tr. | 10-19 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | |
| Mersa Matruh (A) | 0.3 | 1.6 | 0.6 | 1.1 | 0.9 | Tr. | 0.0 | Tr. | 10 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | |
| Alexandria (A) | 2.8 | 2.0 | 1.0 | 1.0 | 1.6 | 0.0 | —Tr. | 0.0 | — | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| Port Said (A) | 1.2 | 2.0 | 0.1 | 0.6 | 1.0 | 0.0 | —Tr. | 0.0 | — | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| El Arish | 1.8 | 2.3 | 0.6 | 1.0 | 1.1 | 0.0 | —Tr. | 0.0 | — | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| Ghazza | 2.8 | 2.7 | 0.7 | 1.9 | 2.3 | 0.0 | —0.2 | 0.0 | — | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| Tanta | — | 1.4 | 0.9 | 0.0 | — | 0.0 | —Tr. | 0.0 | — | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| Cairo. (A) | 1.3 | 3.0 | 0.5 | 0.1 | 1.0 | 0.0 | —0.3 | 0.0 | — | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| Fayoum. | — | 0.1 | 0.1 | 0.2 | — | 0.0 | 0.0 | 0.0 | — | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| Minya (A) | 0.1 | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 | —Tr. | 0.0 | — | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| Assyout (A) | 0.0 | 0.1 | 0.1 | 0.0 | 0.1 | 0.0 | —Tr. | 0.0 | — | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| Luxor (A) | 0.0 | 0.3 | 0.2 | 0.2 | 0.1 | 0.0 | 0.0 | 0.0 | — | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| Aswan (A) | 0.0 | 0.3 | 0.6 | 0.6 | 0.3 | 0.0 | —Tr. | 0.0 | — | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| Siwa. | 0.1 | 0.2 | 0.3 | 0.6 | 0.3 | 0.0 | 0.0 | 0.0 | — | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| Bahariya | 0.1 | 0.1 | 0.2 | 0.1 | 0.1 | 0.0 | —0.2 | 0.0 | — | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| Farafra | 0.2 | 0.1 | 0.0 | 0.0 | 0.5 | 0.0 | 0.0 | 0.0 | — | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| Dakhla | 0.1 | 0.3 | 0.3 | 0.2 | 0.2 | 0.0 | —Tr. | 0.0 | — | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| Kharga | 0.2 | 0.5 | 0.2 | 0.2 | 0.3 | 0.0 | —Tr. | 0.0 | — | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| Tor | 0.3 | 0.5 | 0.2 | 0.2 | 0.2 | 0.0 | —Tr. | 0.0 | — | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| Hurghada | 0.1 | 0.4 | 0.2 | 0.2 | 0.8 | 0.0 | 0.0 | 0.0 | — | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| Quseir | 0.0 | 0.4 | 0.3 | 0.2 | 0.2 | 0.0 | 0.0 | 0.0 | — | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |

TABLE A 4—DAYS OF OCCURRENCE OF MISCELLANEOUS WEATHER PHENOMENA.

JUNE 1964

| Station | Precipitation | | | | Frost | Thunderstorm | Mist Vis \geq 1000 metres | Fog Vis $<$ 1000 Metres | Haze Vis \geq 1000 Metres | Thick Haze Vis $<$ 1000 Metres | Dust or Sandrising Vis \geq 1000 Metres | Dust or Sandstorm Vis $<$ 1000 Metres | Gale | Clear Sky | Cloudy Sky |
|----------------------------|---------------|------|-------------|------|-------|--------------|-----------------------------|-------------------------|-----------------------------|--------------------------------|---|---------------------------------------|------|-----------|------------|
| | Rain | Snow | Ice Pellets | Hail | | | | | | | | | | | |
| Sallum | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 2 | 1 | 0 | 23 | 1 |
| Mersa Matruh (A) | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 2 | 1 | 0 | 26 | 0 |
| Alexandria (A) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 20 | 0 |
| Port Said (A) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 25 | 0 |
| El Arish | 0 | 0 | 0 | 0 | 0 | 0 | 5 | 0 | 0 | 0 | 2 | 0 | 0 | 19 | 0 |
| Ghazza | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 15 | 0 |
| Tanta | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | — | — |
| Cairo | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 2 | 17 | 0 | 8 | 0 | 0 | 26 | 0 |
| Fayoum | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | — | — |
| Minya (A) | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 2 | 0 | 0 | 30 | 0 |
| Assyout (A) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 1 | 0 | 0 | 30 | 0 |
| Luxor (A) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 0 | 1 | 0 | 0 | 30 | 0 |
| Aswan (A) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 2 | 0 | 0 | 30 | 0 |
| Siwa | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 29 | 0 |
| Bahariya | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 30 | 0 |
| Farafra | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 0 | 0 | 30 | 0 |
| Dakhla | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 2 | 0 | 0 | 30 | 0 |
| Kharga | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 9 | 0 | 0 | 29 | 0 |
| Tor | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 0 | 28 | 0 |
| Hurgbada | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 28 | 0 |
| Quseir | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 1 | 0 | 0 | 30 | 0 |

**TABLE A 5.—NUMBER IN HOURS OF OCCURRENCES OF CONCURRENT SURFACE
WIND SPEED AND DIRECTION RECORDED WITHIN SPECIFIED RANGES**

JUNE — 1964

| Station | Calm (hours) | Variable (hours) | Unrecorded (hours) | Wind speed in knots | Number in hours of occurrences of wind blowing from the ranges of directions indicated | | | | | | | | | | | | |
|-------------------|--------------|------------------|--------------------|------------------------|---|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|----------------|
| | | | | | 345 | 015 | 045 | 075 | 105 | 135 | 165 | 195 | 225 | 255 | 285 | 315 | All directions |
| | | | | | / | / | / | / | / | / | / | / | / | / | / | / | |
| | | | | | 014 | 044 | 074 | 104 | 134 | 164 | 194 | 224 | 254 | 284 | 314 | 344 | |
| Mersa Matruh (A) | 64 | 1 | 17 | 1-10 | 73 | 20 | 12 | 12 | 20 | 6 | 3 | 0 | 0 | 26 | 78 | 63 | 313 |
| | | | | 11-27 | 54 | 11 | 8 | 16 | 14 | 2 | 1 | 3 | 2 | 14 | 36 | 161 | 322 |
| | | | | 28-47 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 3 |
| | | | | ≥48 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | | | | All speeds | 127 | 31 | 20 | 28 | 34 | 8 | 4 | 3 | 2 | 40 | 117 | 224 | 638 |
| Alexandria (A) | 7 | 0 | 0 | 1-10 | 56 | 23 | 23 | 15 | 15 | 7 | 7 | 12 | 4 | 43 | 191 | 166 | 562 |
| | | | | 11-27 | 1 | 6 | 15 | 4 | 0 | 0 | 0 | 1 | 0 | 15 | 67 | 42 | 151 |
| | | | | 28-47 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | | | | ≥48 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | | | | All speeds | 57 | 29 | 38 | 19 | 15 | 7 | 7 | 13 | 4 | 58 | 258 | 208 | 713 |
| Port Said . . (A) | 0 | 2 | 1 | 1-10 | 112 | 23 | 11 | 11 | 7 | 4 | 1 | 12 | 37 | 79 | 36 | 82 | 415 |
| | | | | 11-27 | 43 | 20 | 29 | 15 | 4 | 0 | 0 | 0 | 0 | 20 | 51 | 120 | 302 |
| | | | | 28-47 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | | | | ≥48 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | | | | All speeds | 155 | 43 | 40 | 26 | 11 | 4 | 1 | 12 | 37 | 99 | 87 | 202 | 717 |
| Ghazza | 0 | 31 | 0 | 1-10 | 33 | 21 | 18 | 19 | 22 | 137 | 48 | 14 | 35 | 75 | 106 | 94 | 622 |
| | | | | 11-27 | 18 | 14 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 9 | 14 | 10 | 67 |
| | | | | 28-47 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | | | | ≥48 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | | | | All speeds | 51 | 35 | 18 | 19 | 22 | 137 | 48 | 14 | 37 | 84 | 120 | 104 | 689 |
| Tanta. | 41 | 4 | 0 | 1-10 | 60 | 33 | 23 | 25 | 23 | 4 | 4 | 15 | 55 | 64 | 163 | 177 | 646 |
| | | | | 11-27 | 8 | 0 | 8 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 8 | 4 | 29 |
| | | | | 28-47 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | | | | ≥48 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | | | | All speeds | 68 | 33 | 31 | 26 | 23 | 4 | 4 | 15 | 55 | 64 | 171 | 181 | 675 |
| Cairo (A) | 13 | 1 | 7 | 1-10 | 56 | 63 | 53 | 16 | 3 | 1 | 0 | 1 | 4 | 26 | 75 | 118 | 416 |
| | | | | 11-27 | 40 | 42 | 41 | 21 | 7 | 4 | 1 | 1 | 6 | 3 | 34 | 83 | 283 |
| | | | | 28-47 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | | | | ≥48 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | | | | All speeds | 96 | 105 | 94 | 37 | 10 | 5 | 1 | 2 | 10 | 29 | 109 | 201 | 699 |
| Fayoum | 63 | 0 | 0 | 1-10 | 390 | 39 | 7 | 6 | 1 | 1 | 10 | 9 | 1 | 13 | 36 | 136 | 649 |
| | | | | 11-27 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 8 |
| | | | | 28-47 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | | | | ≥48 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | | | | All speeds | 392 | 39 | 7 | 6 | 1 | 1 | 10 | 9 | 1 | 13 | 36 | 142 | 657 |

TABLE A 5. (contd.)—NUMBER IN HOURS OF OCCURRENCES OF CONCURRENT SURFACE WIND SPEED AND DIRECTION RECORDED WITHIN SPECIFIED RANGES

JUNE — 1964

| Station | Calm (hours) | Variable (hours) | Unrecorded (hours) | Wind speed in knots | Number in hours of occurrences of wind blowing from the ranges of directions indicated | | | | | | | | | | | | | All directions |
|-------------------|--------------|------------------|--------------------|------------------------|---|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|----------------|
| | | | | | 345 | 015 | 045 | 075 | 105 | 135 | 165 | 195 | 225 | 255 | 285 | 315 | | |
| | | | | | / | / | / | / | / | / | / | / | / | / | / | / | | |
| | | | | | 014 | 044 | 074 | 104 | 134 | 164 | 194 | 224 | 254 | 284 | 314 | 344 | | |
| Minya . . . (A) | 12 | 10 | 0 | 1-10 | 55 | 11 | 3 | 6 | 11 | 11 | 1 | 3 | 4 | 8 | 44 | 245 | 402 | |
| | | | | 11-27 | 18 | 1 | 0 | 0 | 0 | 3 | 0 | 0 | 1 | 3 | 270 | 296 | | |
| | | | | 28-47 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | |
| | | | | ≥48 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | |
| | | | | All speeds | 73 | 12 | 3 | 6 | 11 | 14 | 1 | 3 | 4 | 9 | 47 | 515 | 698 | |
| Assyout . . . (A) | 6 | 0 | 0 | 1-10 | 9 | 0 | 3 | 10 | 15 | 12 | 3 | 5 | 30 | 178 | 143 | 103 | 511 | |
| | | | | 11-27 | 3 | 20 | 1 | 0 | 0 | 0 | 0 | 0 | 4 | 64 | 111 | 203 | | |
| | | | | 28-47 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | |
| | | | | ≥48 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | |
| | | | | All speeds | 12 | 20 | 4 | 10 | 15 | 12 | 3 | 5 | 30 | 182 | 207 | 214 | 714 | |
| Luxor . . . (A) | 6 | 5 | 27 | 1-10 | 19 | 34 | 6 | 11 | 20 | 29 | 50 | 59 | 35 | 39 | 80 | 205 | 587 | |
| | | | | 11-27 | 2 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 14 | 78 | 95 | | |
| | | | | 28-47 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | |
| | | | | ≥48 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | |
| | | | | All speeds | 21 | 34 | 6 | 11 | 21 | 29 | 50 | 59 | 35 | 39 | 94 | 283 | 682 | |
| Aswan . . . (A) | 0 | 0 | 85 | 1-10 | 131 | 93 | 6 | 0 | 0 | 0 | 2 | 0 | 0 | 7 | 54 | 129 | 422 | |
| | | | | 11-27 | 76 | 29 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 24 | 81 | 213 | | |
| | | | | 28-47 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | |
| | | | | ≥48 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | |
| | | | | All speeds | 207 | 122 | 6 | 0 | 0 | 0 | 2 | 0 | 0 | 10 | 78 | 210 | 635 | |
| Siwa | 47 | 4 | 0 | 1-10 | 62 | 61 | 83 | 61 | 37 | 18 | 11 | 5 | 17 | 43 | 47 | 51 | 496 | |
| | | | | 11-27 | 25 | 26 | 13 | 9 | 3 | 5 | 7 | 6 | 0 | 6 | 37 | 36 | 173 | |
| | | | | 28-47 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| | | | | ≥48 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| | | | | All speeds | 87 | 87 | 96 | 70 | 40 | 23 | 18 | 11 | 17 | 49 | 84 | 87 | 669 | |
| Dakhla | 4 | 2 | 128 | 1-10 | 88 | 117 | 26 | 10 | 14 | 14 | 11 | 18 | 16 | 16 | 48 | 157 | 535 | |
| | | | | 11-27 | 15 | 28 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 51 | |
| | | | | 28-47 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| | | | | ≥48 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| | | | | All speeds | 103 | 145 | 31 | 10 | 14 | 14 | 11 | 18 | 16 | 16 | 48 | 160 | 586 | |
| Hurghada | 2 | 2 | 2 | 1-10 | 18 | 16 | 2 | 2 | 1 | 4 | 1 | 2 | 0 | 10 | 39 | 26 | 121 | |
| | | | | 11-27 | 157 | 4 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 25 | 155 | 240 | 582 | |
| | | | | 28-47 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 10 | 11 | | |
| | | | | ≥48 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | |
| | | | | All speeds | 175 | 20 | 2 | 2 | 1 | 5 | 1 | 2 | 0 | 35 | 195 | 276 | 714 | |
| Quseir | 3 | 0 | 19 | 1-10 | 79 | 4 | 3 | 2 | 1 | 2 | 2 | 5 | 11 | 18 | 63 | 130 | 320 | |
| | | | | 11-27 | 181 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 7 | 9 | 180 | 378 | | |
| | | | | 28-47 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | |
| | | | | ≥48 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | |
| | | | | All speeds | 260 | 5 | 3 | 2 | 1 | 2 | 2 | 5 | 11 | 25 | 72 | 310 | 698 | |

TABLE B 1. — UPPER AIR CLIMATOLOGICAL DATA

JUNE — 1964

| Station | Pressure Surface Millibar | Altitude of Pressure Surface (gpm) | | | | Temperature (°C) | | | | Dew Point (°C) | |
|------------------------|------------------------------|------------------------------------|--------|---------|--------|------------------|-------|---------|--------|----------------|-------|
| | | N | Mean | Highest | Lowest | N | Mean | Highest | Lowest | N | Mean |
| Mersa Matruh 0000 U.T. | Surface | 30 | 1010mb | 1014mb | 1005mb | 30 | 21.3 | 25.0 | 18.3 | 30 | 18.6 |
| | 1000 | 30 | 128 | 165 | 89 | 30 | 21.3 | 26.8 | 18.4 | 30 | 17.5 |
| | 850 | 30 | 1532 | 1571 | 1501 | 30 | 17.3 | 23.0 | 13.2 | 27 | 1.7 |
| | 700 | 30 | 3159 | 3219 | 3120 | 30 | 6.9 | 10.8 | 2.4 | 20 | -6.3 |
| | 600 | 30 | 4408 | 4471 | 4356 | 30 | -0.9 | 2.8 | -5.7 | 10 | -12.0 |
| | 500 | 30 | 5837 | 5900 | 5760 | 30 | -10.9 | -6.8 | -15.6 | 3 | -17.5 |
| | 400 | 30 | 7512 | 7593 | 7410 | 30 | -23.6 | -19.8 | -29.0 | 2 | -30.7 |
| | 300 | 30 | 9555 | 9662 | 9400 | 30 | -37.3 | -27.5 | -44.1 | — | — |
| | 200 | 30 | 12203 | 12439 | 12047 | 30 | -53.1 | -48.6 | -62.5 | — | — |
| | 150 | 30 | 14079 | 14273 | 13888 | 30 | -60.4 | -54.0 | -65.9 | — | — |
| | 100 | 25 | 16560 | 16683 | 16419 | 25 | -66.9 | -57.4 | -77.8 | — | — |
| | 70 | 6 | 18710 | 18800 | 18600 | 6 | -65.2 | -63.8 | -67.9 | — | — |
| | 50 | 5 | 20804 | 20877 | 20691 | 5 | -57.2 | -56.2 | -58.5 | — | — |
| | 30 | 4 | 24053 | 24154 | 23947 | 4 | -52.2 | -51.0 | -54.3 | — | — |
| | 20 | 4 | 26697 | 26763 | 26579 | 4 | -48.6 | -46.9 | -51.4 | — | — |
| | 10 | — | — | — | — | — | — | — | — | — | — |
| Helwan 0000 U.T. | Surface | 30 | 993mb | 997mb | 990mb | 30 | 22.1 | 28.2 | 18.6 | 30 | 14.8 |
| | 1000 | 30 | 84 | 116 | 60 | — | — | — | — | — | — |
| | 850 | 30 | 1484 | 1514 | 1448 | 30 | 18.1 | 23.3 | 15.0 | 28 | -1.4 |
| | 700 | 30 | 3117 | 3160 | 3080 | 30 | 8.9 | 11.6 | 06.1 | 11 | -8.5 |
| | 600 | 30 | 4374 | 4417 | 4326 | 30 | 1.2 | 3.8 | -1.8 | 5 | -13.4 |
| | 500 | 30 | 5816 | 5864 | 5744 | 30 | -8.5 | -4.7 | -13.2 | 4 | -20.2 |
| | 400 | 30 | 7507 | 7589 | 7399 | 30 | -20.7 | -13.6 | -26.5 | 3 | -33.7 |
| | 300 | 30 | 9577 | 9686 | 9416 | 30 | -34.8 | -26.6 | -46.3 | — | — |
| | 200 | 30 | 12301 | 12477 | 12101 | 30 | -52.3 | -48.0 | -59.1 | — | — |
| | 150 | 29 | 14125 | 14310 | 13917 | 29 | -61.2 | -53.8 | -66.2 | — | — |
| | 100 | 29 | 16578 | 16731 | 16411 | 29 | -70.7 | -63.2 | -78.0 | — | — |
| | 70 | 25 | 18705 | 18840 | 18570 | 25 | -67.0 | -62.0 | -70.8 | — | — |
| | 50 | 21 | 20784 | 20888 | 20642 | 21 | -58.3 | -52.0 | -61.7 | — | — |
| | 30 | 13 | 24030 | 24143 | 23911 | 13 | -52.3 | -50.2 | -53.3 | — | — |
| | 20 | 5 | 26670 | 26805 | 26567 | 5 | -46.5 | -45.2 | -47.7 | — | — |
| | 10 | — | — | — | — | — | — | — | — | — | — |
| Aswan 0000 U.T. | Surface | 30 | 984mb | 986mb | 981mb | 30 | 26.6 | 30.6 | 24.1 | 30 | 2.2 |
| | 1000 | — | — | — | — | — | — | — | — | — | — |
| | 850 | 30 | 1476 | 1502 | 1448 | 30 | 23.2 | 29.4 | 17.8 | 17 | 0.9 |
| | 700 | 30 | 3133 | 3176 | 3104 | 30 | 12.2 | 14.8 | 8.8 | 10 | -6.5 |
| | 600 | 30 | 4402 | 4450 | 4359 | 30 | 2.7 | 6.0 | -0.7 | 10 | -11.3 |
| | 500 | 30 | 5851 | 5914 | 5786 | 30 | -6.4 | -1.8 | -11.6 | 6 | -19.8 |
| | 400 | 30 | 7561 | 7632 | 7457 | 30 | -18.1 | -12.6 | -23.4 | 1 | -32.0 |
| | 300 | 30 | 9649 | 9748 | 9505 | 30 | -33.0 | -26.5 | -39.7 | — | — |
| | 200 | 30 | 12355 | 12540 | 12221 | 30 | -52.4 | -49.8 | -55.9 | — | — |
| | 150 | 26 | 14200 | 14364 | 14009 | 26 | -65.5 | -63.0 | -67.7 | — | — |
| | 100 | 23 | 16542 | 16750 | 16431 | 23 | -76.4 | -70.5 | -81.6 | — | — |
| | 70 | 14 | 18679 | 18820 | 18510 | 14 | -70.0 | -65.7 | -74.5 | — | — |
| | 50 | 12 | 20739 | 20866 | 20532 | 12 | -59.9 | -57.3 | -63.0 | — | — |
| | 30 | 10 | 23998 | 24137 | 23856 | 10 | -51.5 | -49.0 | -54.0 | — | — |
| | 20 | 6 | 26678 | 26802 | 26526 | 6 | -45.6 | -44.5 | -49.8 | — | — |
| | 10 | — | — | — | — | — | — | — | — | — | — |

N = Number of observations of specified pressure surface.

* The atmospheric pressure corrected to the elevation of the radiosonde stations.

TABLE B 1 (contd.)—UPPER AIR CLIMATOLOGICAL DATA

JUNE — 1964

| Station | Pressure Surface Millibar | Altitude of Pressure Surface (gpm) | | | | Temperature (°C) | | | | Dew Point (°C) | |
|------------------------|------------------------------|------------------------------------|---------|---------|---------|------------------|-------|---------|--------|----------------|-------|
| | | N | Mean | Highest | Lowest | N | Mean | Highest | Lowest | N | Mean |
| Marsa Matruh 1200 U.T. | Surface | 30 | *1010mb | *1015mb | *1005mb | 30 | 25.5 | 29.7 | 21.7 | 30 | 18.9 |
| | 1000 | 30 | 129 | 175 | 89 | 30 | 24.8 | 29.8 | 20.9 | 30 | 18.6 |
| | 850 | 30 | 1537 | 1585 | 1510 | 30 | 17.7 | 23.6 | 13.4 | 28 | 1.6 |
| | 700 | 30 | 3167 | 3231 | 3123 | 30 | 7.4 | 10.7 | 4.2 | 18 | -6.6 |
| | 600 | 30 | 4421 | 4476 | 4361 | 30 | -0.1 | 3.6 | -4.3 | 7 | -9.0 |
| | 500 | 30 | 5852 | 5924 | 5797 | 30 | -9.9 | -5.0 | -14.0 | 4 | -19.9 |
| | 400 | 30 | 7532 | 7620 | 7447 | 30 | -21.1 | -17.8 | -28.4 | 2 | -28.3 |
| | 300 | 30 | 9550 | 9721 | 9446 | 30 | -36.6 | -23.3 | -43.2 | 1 | -42.4 |
| | 200 | 30 | 12294 | 12533 | 12084 | 30 | -53.0 | -46.9 | -58.3 | — | — |
| | 150 | 29 | 14118 | 14374 | 13940 | 29 | -59.9 | -53.8 | -63.8 | — | — |
| | 100 | 27 | 16611 | 16819 | 16482 | 27 | -67.4 | -60.0 | -74.8 | — | — |
| | 70 | 15 | 18768 | 18980 | 18660 | 15 | -65.9 | -59.7 | -75.1 | — | — |
| | 50 | 3 | 20353 | 21355 | 20311 | 3 | -57.0 | -55.0 | -62.0 | — | — |
| | 30 | 1 | 24096 | — | — | 1 | -55.9 | — | — | — | — |
| | 20 | 1 | 26694 | — | — | 1 | -53.0 | — | — | — | — |
| | 10 | — | — | — | — | — | — | — | — | — | — |
| Helwan 1200 U.T. | Surface | 30 | *993mb | *996mb | *990mb | 30 | 33.0 | 41.6 | 28.5 | 30 | 9.1 |
| | 1000 | 30 | 82 | 116 | 60 | — | — | — | — | — | — |
| | 850 | 30 | 1501 | 1536 | 1473 | 29 | 19.0 | 26.5 | 14.0 | 23 | 1.0 |
| | 700 | 30 | 3137 | 3188 | 3102 | 30 | 9.2 | 13.3 | 4.2 | 12 | -10.5 |
| | 600 | 30 | 4397 | 4456 | 4355 | 30 | 1.8 | 6.4 | -1.8 | 4 | -12.8 |
| | 500 | 30 | 5837 | 5923 | 5784 | 30 | -8.2 | -4.0 | -13.0 | 2 | -22.1 |
| | 400 | 30 | 7531 | 7639 | 7450 | 30 | -20.0 | -12.3 | -26.1 | 1 | -33.0 |
| | 300 | 30 | 9610 | 9751 | 9473 | 30 | -34.1 | -26.6 | -41.6 | — | — |
| | 200 | 30 | 12349 | 12603 | 12129 | 30 | -51.1 | -46.3 | -57.5 | — | — |
| | 150 | 29 | 14133 | 14440 | 13931 | 29 | -60.6 | -53.8 | -64.1 | — | — |
| | 100 | 28 | 16647 | 16910 | 16482 | 28 | -71.1 | -64.2 | -77.7 | — | — |
| | 70 | 25 | 18768 | 19000 | 18500 | 25 | -65.7 | -61.0 | -75.2 | — | — |
| | 50 | 17 | 20942 | 21952 | 20760 | 17 | -56.1 | -50.0 | -59.7 | — | — |
| | 30 | 7 | 24199 | 24356 | 24068 | 7 | -49.4 | -47.6 | -50.7 | — | — |
| | 20 | 4 | 26886 | 27020 | 26749 | 4 | -44.4 | -41.0 | -46.4 | — | — |
| | 10 | — | — | — | — | — | — | — | — | — | — |
| Aswan 1200 U.T. | Surface | 30 | *984mb | *986mb | *980mb | 30 | 39.2 | 44.6 | 36.2 | 30 | 5.1 |
| | 1000 | — | — | — | — | — | — | — | — | — | — |
| | 850 | 30 | 1498 | 1529 | 1458 | 30 | 24.3 | 29.7 | 20.1 | 23 | -0.9 |
| | 700 | 30 | 3157 | 3206 | 3109 | 30 | 12.8 | 15.6 | 10.3 | 12 | -7.3 |
| | 600 | 30 | 4130 | 4198 | 4376 | 30 | 3.5 | 6.2 | -0.1 | 14 | -13.2 |
| | 500 | 30 | 5882 | 5938 | 5815 | 30 | -6.3 | -1.6 | -10.2 | 5 | -21.7 |
| | 400 | 30 | 7595 | 7647 | 7514 | 30 | -17.4 | -12.0 | -23.7 | 1 | -33.6 |
| | 300 | 30 | 9694 | 9785 | 9557 | 30 | -31.7 | -26.2 | -38.6 | — | — |
| | 200 | 30 | 12445 | 12576 | 12240 | 30 | -51.0 | -46.5 | -53.7 | — | — |
| | 150 | 29 | 14262 | 14410 | 13996 | 29 | -64.0 | -59.0 | -66.4 | — | — |
| | 100 | 20 | 16662 | 16818 | 16461 | 20 | -76.7 | -72.2 | -83.6 | — | — |
| | 70 | 8 | 18758 | 18840 | 18674 | 8 | -70.6 | -66.0 | -76.4 | — | — |
| | 50 | 7 | 20844 | 20896 | 20813 | 7 | -55.7 | -52.3 | -58.4 | — | — |
| | 30 | 1 | 24097 | — | — | 1 | -52.0 | — | — | — | — |
| | 20 | — | — | — | — | — | — | — | — | — | — |
| | 10 | — | — | — | — | — | — | — | — | — | — |

N = Number of observations of specified pressure surface.

* The atmospheric pressure corrected to the elevation of the radiosonde stations.

**TABLE B 2. MEAN AND EXTREME VALUES OF THE FREEZING LEVEL AND THE TROPOPAUSE;
THE HIGHEST WIND SPEED IN THE UPPER AIR**

JUNE — 1964

| Station | Freezing Level | | | | | | | | | First Tropopause | | | | | | | | | Highest wind speed | | | |
|-----------|----------------------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|------------------|----------------|------------------|----------------|----------------|------------------|----------------|----------------|------------------|--------------------|----------------|----------------------|----------------|
| | Mean | | | Highest | | | Lowest | | | Mean | | | Highest | | | Lowest | | | Altitude (gpm) | Pressure (mb.) | Direction (000—360)° | Speed in Knots |
| | Altitude (gpm) | Pressure (mb.) | Dew point (°C) | Altitude (gpm) | Pressure (mb.) | Dew point (°C) | Altitude (gpm) | Pressure (mb.) | Dew point (°C) | Altitude (gpm) | Pressure (mb.) | Temperature (°C) | Altitude (gpm) | Pressure (mb.) | Temperature (°C) | Altitude (gpm) | Pressure (mb.) | Temperature (°C) | | | | |
| 0000 U.T. | (N) | (N) | (N) | | | | | | | (N) | (N) | (N) | | | | | | | | | | |
| | M. Matruh. A 4261 (30) | 611 (30) | -9.7 (13) | 4890 | 566 | — | 3600 | 660 | -8.3 | 13306 (20) | 171 (20) | -61.9 (20) | 17500 | 87 | -78.0 | 10160 | 267 | -49.5 | 13200 | 174 | 280 | 134 |
| | Helwan . . . 4567 (30) | 587 (30) | -10.9 (5) | 4950 | 559 | — | 4030 | 622 | — | 14675 (27) | 143 (27) | -66.6 (27) | 17500 | 85 | -67.1 | 10330 | 261 | -47.5 | 14040 | 148 | 240 | 146 |
| 1200 U.T. | Aswan . . . A 4797 (30) | 570 (30) | -12.2 (10) | 5340 | 535 | — | 4330 | 602 | — | 15141 (22) | 102 (22) | -72.4 (22) | 17220 | 92 | -77.1 | 13030 | 176 | -61.6 | 12800 | 154 | 240 | 135 |
| | (N) | (N) | (N) | | | | | | | (N) | (N) | (N) | | | | | | | | | | |
| | M. Matruh. A 4404 (30) | 601 (30) | -7.6 (6) | 4900 | 565 | — | 3770 | 648 | -8.3 | 14053 (22) | 160 (22) | -61.2 (22) | 17820 | 84 | -71.4 | 11100 | 272 | -45.5 | 10800 | 252 | 270 | 150 |
| 1200 U.T. | Helwan . . . 4662 (30) | 581 (30) | -11.8 (5) | 5380 | 535 | — | 3500 | 669 | — | 14945 (25) | 173 (25) | -62.8 (25) | 17770 | 83 | -76.9 | 11300 | 228 | -53.3 | 13200 | 175 | 250 | 148 |
| | Aswan . . . A 4936 (30) | 563 (30) | -14.4 (10) | 5700 | 514 | — | 4380 | 601 | -16.8 | 16224 (12) | 109 (12) | -75.3 (12) | 17850 | 82 | -79.5 | 14100 | 148 | -66.5 | 8500 | 353 | 230 | 90 |

N = The number of cases the element has been observed during the month.

**TABLE B 3.— NUMBER OF OCCURRENCES OF WIND DIRECTION WITHIN SPECIFIED RANGES AND THE MEAN
SCALAR WIND SPEED AT THE STANDARD AND SELECTED PRESSURE SURFACES
MERSA MATRUH (A) — JUNE 1964**

| Time | Pressure Surface Millibar | Wind between ranges of direction (000—360)° | | | | | | | | | | | | | | | | | | | | | | | | Number of calm winds | Total number of observations (TN) | Mean scalar wind speed (Knots) |
|-----------|------------------------------|---|-----------|-----------------|-----------|-----------------|-----------|-----------------|-----------|-----------------|-----------|-----------------|-----------|-----------------|-----------|-----------------|-----------|-----------------|-----------|-----------------|-----------|-----------------|-----------|-----------------|-----------|-------------------------|--------------------------------------|-----------------------------------|
| | | 345 / 014 | | 015 / 044 | | 045 / 074 | | 075 / 104 | | 105 / 134 | | 135 / 164 | | 165 / 194 | | 195 / 224 | | 225 / 254 | | 255 / 284 | | 285 / 314 | | 315 / 344 | | | | |
| | | N | (ff) m | N | (ff) m | N | (ff) m | N | (ff) m | N | (ff) m | N | (ff) m | N | (ff) m | N | (ff) m | N | (ff) m | N | (ff) m | N | (ff) m | N | (ff) m | | | |
| 0000 U.T. | Surface | 1 | 10 | 0 | — | 1 | 3 | 0 | — | 0 | — | 1 | 21 | 1 | 11 | 0 | — | 0 | — | 4 | 9 | 10 | 10 | 5 | 6 | 7 | 30 | 7 |
| | 1000 | 1 | 10 | 0 | — | 1 | 3 | 0 | — | 0 | — | 1 | 21 | 0 | — | 1 | 11 | 0 | — | 2 | 14 | 12 | 10 | 6 | 8 | 30 | 8 | |
| | 850 | 9 | 17 | 2 | 28 | 1 | 13 | 0 | — | 0 | — | 0 | — | 2 | 16 | 0 | — | 0 | — | 1 | 31 | 8 | 23 | 7 | 24 | 30 | 21 | |
| | 700 | 2 | 24 | 2 | 30 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 2 | 18 | 1 | 19 | 3 | 33 | 10 | 28 | 10 | 25 | 30 | 26 | |
| | 600 | 0 | — | 1 | 24 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 1 | 34 | 3 | 16 | 4 | 35 | 12 | 27 | 9 | 24 | 30 | 26 | |
| | 500 | 1 | 34 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 3 | 28 | 10 | 34 | 11 | 37 | 5 | 28 | 30 | 33 | |
| | 400 | 2 | 28 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 3 | 30 | 11 | 38 | 7 | 36 | 4 | 33 | 30 | 27 | |
| | 300 | 1 | 45 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 4 | 51 | 9 | 47 | 8 | 50 | 2 | 16 | 30 | 35 | |
| | 200 | 1 | 65 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 1 | 59 | 8 | 66 | 8 | 61 | 2 | 50 | 0 | — | 24 | 46 | |
| | 150 | 1 | 100 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 7 | 58 | 5 | 58 | 0 | — | 1 | 72 | 20 | 62 | |
| | 100 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 2 | 42 | 3 | 64 | 1 | 76 | 0 | — | 14 | 62 | |
| | 70 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 1 | 22 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | 1 | 59 |
| | 60 | 0 | — | 0 | — | 0 | — | 1 | 46 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | 1 | 46 |
| | 50 | 0 | — | 0 | — | 0 | — | 0 | — | 1 | 25 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | 1 | 25 |
| | 40 | 0 | — | 0 | — | 0 | — | 1 | 46 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 9 | — | 0 | — | 0 | 1 | 46 |
| 30 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 1 | 30 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | 1 | 30 | |
| 20 | 0 | — | 0 | — | 0 | — | 1 | 52 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | 1 | 52 | |
| 10 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | |
| 1200 U.T. | Surface | 7 | 12 | 2 | 12 | 2 | 16 | 2 | 20 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 1 | 15 | 1 | 18 | 15 | 15 | 0 | 30 | 15 |
| | 1000 | 7 | 11 | 1 | 12 | 1 | 12 | 3 | 19 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 1 | 17 | 3 | 20 | 14 | 16 | 0 | 30 | 15 |
| | 850 | 5 | 21 | 2 | 11 | 0 | — | 0 | — | 0 | — | 1 | 34 | 0 | — | 3 | 18 | 1 | 35 | 2 | 30 | 11 | 17 | 5 | 22 | 0 | 30 | 20 |
| | 700 | 2 | 26 | 1 | 25 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 1 | 63 | 2 | 33 | 4 | 29 | 11 | 23 | 9 | 25 | 0 | 30 | 27 |
| | 600 | 3 | 19 | 1 | 18 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 7 | 31 | 11 | 24 | 7 | 22 | 0 | 30 | 24 |
| | 500 | 3 | 23 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 1 | 20 | 10 | 39 | 14 | 29 | 1 | 17 | 0 | 30 | 31 |
| | 400 | 2 | 26 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 1 | 44 | 17 | 41 | 7 | 36 | 1 | 38 | 0 | — | 28 | 36 | |
| | 300 | 2 | 16 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 5 | 62 | 16 | 47 | 2 | 70 | 1 | 30 | 0 | — | 26 | 48 | |
| | 200 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 7 | 71 | 10 | 70 | 3 | 22 | 0 | — | 0 | — | 20 | 65 | |
| | 150 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 6 | 66 | 7 | 51 | 1 | 40 | 0 | — | 0 | — | 0 | 15 | 56 |
| | 100 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 4 | 23 | 3 | 60 | 0 | — | 0 | — | 0 | — | 0 | 7 | 39 |
| | 70 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 1 | 37 | 0 | — | 1 | 8 | 0 | — | 0 | — | 0 | — | 0 | 2 | 22 |
| | 60 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 1 | 20 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | 1 | 20 |
| | 50 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| | 40 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| 30 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | |
| 20 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | |
| 10 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | |

N = The number of cases the element has been observed during the month.

TN = The total number of cases the wind has been observed for all directions during the month.

TABLE B 3 (contd.)—NUMBER OF OCCURRENCES OF WIND DIRECTION WITHIN SPECIFIED RANGES AND THE MEAN SCALAR WIND SPEED AT THE STANDARD AND SELECTED PRESSURE SURFACES

HELWAN — JUNE 1964

| Time | Pressure Surface Millibar | Wind between ranges of direction (000--360)° | | | | | | | | | | | | | | | | | | | | Number of calm winds | Total number of observations (TN) | *Mean scalar wind speed (Knots) | | | | |
|-----------|------------------------------|--|-----------|-----------------|-----------|-----------------|-----------|-----------------|-----------|-----------------|-----------|-----------------|-----------|-----------------|-----------|-----------------|-----------|-----------------|-----------|-----------------|-----------|-------------------------|--------------------------------------|------------------------------------|-----------------|-----------|-----------------|-----------|
| | | 345 / 014 | | 015 / 044 | | 045 / 074 | | 075 / 104 | | 105 / 134 | | 135 / 164 | | 165 / 194 | | 195 / 224 | | 225 / 254 | | 255 / 284 | | | | | 285 / 314 | | 315 / 344 | |
| | | N | (ff) m | N | (ff) m | N | (ff) m | N | (ff) m | N | (ff) m | N | (ff) m | N | (ff) m | N | (ff) m | N | (ff) m | N | (ff) m | | | | N | (ff) m | N | (ff) m |
| 0000 U.T. | Surface | 7 | 6 | 4 | 8 | 6 | 11 | 1 | 15 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 1 | 13 | 7 | 8 | 4 | 30 | 8 |
| | 1000 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | |
| | 850 | 5 | 16 | 4 | 18 | 1 | 6 | 1 | 5 | 0 | — | 1 | 13 | 0 | — | 1 | 22 | 1 | 6 | 2 | 18 | 7 | 18 | 7 | 17 | 0 | 30 | 16 |
| | 700 | 3 | 24 | 3 | 17 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 1 | 24 | 2 | 23 | 4 | 20 | 13 | 19 | 4 | 15 | 0 | 30 | 20 |
| | 600 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 2 | 30 | 4 | 28 | 11 | 25 | 7 | 17 | 6 | 16 | 0 | 30 | 22 |
| | 500 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 1 | 30 | 8 | 26 | 13 | 25 | 6 | 19 | 2 | 21 | 0 | 30 | 24 |
| | 400 | 1 | 12 | 1 | 14 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 2 | 35 | 10 | 30 | 12 | 41 | 4 | 24 | 0 | — | 0 | 30 | 33 |
| | 300 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 1 | 50 | 16 | 58 | 7 | 61 | 5 | 23 | 0 | — | 0 | 29 | 52 |
| | 200 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 2 | 78 | 16 | 67 | 7 | 52 | 0 | — | 0 | — | 0 | 25 | 63 |
| | 150 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 2 | 68 | 18 | 62 | 2 | 56 | 0 | — | 0 | — | 0 | 20 | 62 |
| | 100 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 1 | 22 | 6 | 29 | 1 | 30 | 0 | — | 0 | — | 1 | 9 | 25 |
| | 70 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 1 | 8 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | 1 | 8 |
| | 60 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| 50 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | |
| 40 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | |
| 30 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | |
| 20 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | |
| 10 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | |
| 1200 U.T. | Surface | 6 | 12 | 3 | 15 | 1 | 21 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 2 | 10 | 5 | 9 | 9 | 11 | 4 | 10 | 0 | 30 | 12 |
| | 1000 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| | 850 | 8 | 9 | 5 | 19 | 1 | 17 | 0 | — | 0 | — | 0 | — | 0 | — | 1 | 14 | 1 | 15 | 1 | 18 | 5 | 15 | 8 | 10 | 0 | 30 | 13 |
| | 700 | 2 | 25 | 4 | 9 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 2 | 13 | 2 | 14 | 5 | 25 | 8 | 14 | 7 | 14 | 0 | 30 | 16 |
| | 600 | 2 | 12 | 1 | 8 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 4 | 25 | 11 | 22 | 6 | 18 | 6 | 14 | 0 | 30 | 19 |
| | 500 | 0 | — | 1 | 17 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 6 | 21 | 18 | 24 | 4 | 23 | 1 | 12 | 0 | 30 | 22 | | |
| | 400 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 10 | 42 | 17 | 31 | 2 | 12 | 1 | 10 | 0 | 30 | 33 | | |
| | 300 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 1 | 54 | 14 | 56 | 14 | 45 | 0 | — | 1 | 59 | 0 | 30 | 51 |
| | 200 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 4 | 74 | 18 | 61 | 6 | 67 | 0 | — | 0 | — | 0 | 28 | 64 |
| | 150 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 6 | 54 | 12 | 60 | 2 | 28 | 0 | — | 0 | — | 0 | 20 | 55 |
| | 100 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 1 | 62 | 0 | — | 3 | 83 | 0 | — | 0 | — | 0 | — | 0 | 4 | 78 |
| | 70 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| | 60 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| 50 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | |
| 40 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | |
| 30 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | |
| 20 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | |
| 10 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | |

N = The number of cases the element has been observed during the month.

TN = The total number of cases the wind has been observed for all directions during the month.

**TABLE B 3 (contd.)—NUMBER OF OCCURRENCES OF WIND DIRECTION WITHIN SPECIFIED RANGES AND
THE MEAN SCALAR WIND SPEED AT THE STANDARD AND SELECTED PRESSURE SURFACES.
ASWAN (A) — JUNE 1964**

| Time | Pressure Surface Millibar | Wind between ranges of direction (000—360)° | | | | | | | | | | | | | | | | | | | | Number of calm winds | Total number of observations (TN) | Mean scalar wind speed (Knots) | | | | |
|-----------|------------------------------|---|------|-----------------|------|-----------------|------|-----------------|------|-----------------|------|-----------------|------|-----------------|------|-----------------|------|-----------------|------|-----------------|------|-------------------------|--------------------------------------|-----------------------------------|-----------------|------|-----------------|------|
| | | 345 / 014 | | 015 / 044 | | 045 / 074 | | 075 / 104 | | 105 / 134 | | 135 / 164 | | 165 / 194 | | 195 / 224 | | 225 / 254 | | 255 / 284 | | | | | 285 / 314 | | 315 / 344 | |
| | | N | (ff) | N | (ff) | N | (ff) | N | (ff) | N | (ff) | N | (ff) | N | (ff) | N | (ff) | N | (ff) | N | (ff) | | | | N | (ff) | N | (ff) |
| | | m | m | m | m | m | m | m | m | m | m | m | m | m | m | m | m | m | m | m | m | | | | m | m | m | m |
| 0000 U.T. | Surfgoe | 25 | 13 | 1 | 10 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 3 | 10 | 1 | 30 | 11 |
| | 1000 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | |
| | 850 | 12 | 13 | 3 | 12 | 2 | 11 | 1 | 4 | 1 | 2 | 0 | — | 0 | — | 0 | — | 1 | 3 | 0 | — | 4 | 14 | 6 | 11 | 0 | 30 | 12 |
| | 700 | 3 | 12 | 0 | — | 0 | — | 0 | — | 1 | 3 | 1 | 12 | 0 | — | 2 | 21 | 7 | 17 | 6 | 12 | 4 | 9 | 6 | 16 | 0 | 30 | 14 |
| | 600 | 1 | 10 | 0 | — | 2 | 41 | 0 | — | 2 | 13 | 0 | — | 0 | — | 6 | 23 | 8 | 22 | 3 | 17 | 5 | 13 | 3 | 18 | 0 | 30 | 18 |
| | 500 | 2 | 8 | 1 | 4 | 0 | — | 1 | 6 | 0 | — | 1 | 12 | 0 | — | 2 | 19 | 9 | 23 | 8 | 17 | 4 | 17 | 2 | 9 | 0 | 30 | 17 |
| | 400 | 2 | 8 | 2 | 5 | 1 | 10 | 0 | — | 0 | — | 1 | 3 | 3 | 7 | 4 | 13 | 6 | 29 | 10 | 21 | 1 | 25 | 0 | — | 0 | 30 | 17 |
| | 300 | 0 | — | 0 | — | 1 | 8 | 1 | 10 | 1 | 6 | 3 | 8 | 1 | 15 | 5 | 23 | 10 | 24 | 5 | 35 | 1 | 38 | 0 | — | 0 | 28 | 23 |
| | 200 | 0 | — | 0 | — | 0 | — | 1 | 10 | 0 | — | 2 | 23 | 3 | 18 | 3 | 31 | 4 | 31 | 3 | 39 | 0 | — | 0 | — | 1 | 17 | 26 |
| | 150 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 1 | 13 | 0 | — | 0 | — | 3 | 26 | 0 | — | 0 | — | 0 | — | 0 | 4 | 22 |
| | 100 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| | 70 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| | 60 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| | 50 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| 40 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | |
| 30 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | |
| 20 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | |
| 10 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | |
| 1200 U.T. | Surface | 21 | 11 | 1 | 12 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 2 | 12 | 5 | 15 | 1 | 30 | 12 |
| | 1000 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | |
| | 850 | 6 | 10 | 2 | 16 | 1 | 1 | 0 | — | 1 | 16 | 0 | — | 0 | — | 0 | — | 0 | — | 1 | 3 | 5 | 14 | 14 | 13 | 0 | 30 | 12 |
| | 700 | 1 | 17 | 0 | — | 0 | — | 0 | — | 0 | — | 1 | 1 | 0 | — | 5 | 25 | 9 | 20 | 7 | 17 | 4 | 20 | 3 | 20 | 0 | 30 | 19 |
| | 600 | 2 | 9 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 1 | 19 | 7 | 30 | 9 | 26 | 5 | 8 | 4 | 14 | 2 | 18 | 0 | 30 | 20 |
| | 500 | 1 | 11 | 3 | 7 | 0 | — | 1 | 7 | 0 | — | 0 | — | 2 | 12 | 7 | 21 | 7 | 27 | 5 | 20 | 4 | 8 | 0 | — | 0 | 30 | 18 |
| | 400 | 0 | — | 2 | 8 | 2 | 10 | 0 | — | 1 | 7 | 2 | 10 | 0 | — | 4 | 24 | 9 | 22 | 8 | 24 | 0 | — | 1 | 14 | 1 | 30 | 19 |
| | 300 | 0 | — | 0 | — | 1 | 7 | 2 | 10 | 2 | 17 | 1 | 4 | 3 | 18 | 1 | 3 | 7 | 37 | 9 | 31 | 1 | 26 | 0 | — | 1 | 28 | 24 |
| | 200 | 0 | — | 0 | — | 0 | — | 0 | — | 1 | 41 | 3 | 17 | 7 | 17 | 1 | 29 | 5 | 50 | 4 | 49 | 1 | 34 | 0 | — | 0 | 22 | 33 |
| | 150 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 1 | 40 | 6 | 36 | 0 | — | 1 | 12 | 1 | 50 | 0 | — | 0 | — | 0 | 9 | 36 |
| | 100 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 3 | 22 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | 3 | 22 |
| | 70 | 0 | — | 0 | — | 0 | — | 1 | 20 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | 1 | 20 |
| | 60 | 0 | — | 0 | — | 0 | — | 0 | — | 1 | 21 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | 1 | 21 |
| | 50 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| 40 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | |
| 30 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | |
| 20 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | |
| 10 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | |

N = The number of cases the element has been observed during the month.

TN = The total number of cases the wind has been observed for all directions during the month.

REVIEW OF AGRO-METEOROLOGICAL STATION AT ED KASR

JUNE 1964

With respect to air temperature and relative humidity, this month was about normal.

The month started with a cool spell giving on the 1st, the lowest values of maximum air temperature (2.4°C below normal), mean of the day (3.3°C below normal), day time mean and vapour pressure deficit and the highest relative humidity (24% above normal), while the absolute minima of air temperature at 5 and 200 cms. (4.4°C below normal) and those of the soil for the different depths were recorded on the following day and the lowest Piche evaporation in the screen (5.0 mms. below normal) on the 3rd.

A distinguished heat wave started on the 10th when the highest soil temperature at 0.3 cm. occurred whereas the absolute maximum air temperature (5.3°C above normal), the highest values of minimum air temperature at 5 and 200 cms. (6.0°C above normal) vapour pressure deficit, and the lowest relative humidity (45% below normal) all occurred with the peak of the wave on the 12th, while the highest evaporation from pan class A and Piche in the screen (9.3 mms. above normal) was reported on the previous day.

A minor heat wave had its peak on the 19th, with the highest values of soil temperatures for the layer 1 to 20 cms. of depth.

The total duration of bright sunshine was 90% of the total possible duration.

Compared with the normal values, the mean daily temperature and the mean Piche evaporation were more by 0.1°C and 0.7 mm. respectively whereas the mean relative humidity was less by 1%.

REVIEW OF AGRO-METEOROLOGICAL STATION AT TAHRIR

JUNE 1964

Successive heat waves and cool spells prevailing.

The most remarkable heat wave started on the 10th with the peak on the 12th when the absolute maximum air temperature (44.8°C) and the highest means for the day, night and day time were recorded together with the lowest values of relative humidity (10%) and vapour pressure and also the highest values of water vapour pressure deficit and evaporation from pan class A and Piche in the screen whereas those in the free air at levels, 1, 60 and 120 cms. above the ground were reported on the previous day.

Another pronounced heat wave had its peak on the 20th with the highest values of soil temperatures for the surface layers down to 20 cms. of depth occurring on that day, while those of the minimum air temperature in the screen and at 5 cms. above ground level were observed on the 24th.

A distinguished cool spell began on the 7th with the peak on the 9th, when the absolute minimum air temperature and the lowest value of water vapour pressure deficit were recorded, whereas the lowest values of soil temperature at depths 0.3 and 1 cm. were observed on the day before.

Another value of the absolute minimum air temperature was associated with the peak of another cool spell on the 2nd together with the absolute minimum air temperature at 5 cms. above the ground and the lowest values of soil temperature at depths 2, 5 and 10 cms.

A cool spell started on the 13th and gave the lowest values of Piche and pan class A evaporation on the 15th and the lowest maximum air temperature on the 17th.

Compared with June of last year, the means of air temperature at 2 metres for the day, night time and day time were higher by 0.5, 2.5 and 0.4°C respectively, while the means for relative humidity and vapour pressure were lower by 4% and 0.1 mm. No material change was observed in the values of mean evaporation or wind speed at 2 metres but the total actual duration of bright sunshine and the mean of the total radiation were higher by 28.1 hours and 25 calories per square centimetre respectively.

The soil temperature maxima at the different depths were lower, while the minima were higher in general by no more than 1.3°C, except for the first centimetre where the extreme soil temperatures were lower by variable amounts.

REVIEW OF AGRO-METEOROLOGICAL STATION AT GIZA

JUNE 1964

This month was about normal with respect to air temperature and relative humidity.

A cold front passed Giza in the early afternoon on the 1st. giving rise to the highest night time mean of wind speed at 0.5, 1.2 and 3 metres above ground level.

On the 2nd, the absolute minima of air temperature at 2 metres (1°C below normal) and 5 cms. above the dry, wet and grass fields were recorded as well as those of soil temperatures in the three fields for the surface layer down to 10 cms. of depth.

Another value of the absolute minimum air temperature in the screen was associated with the peak of a cold spell on the 8th together with the lowest values of the daily mean and night time mean.

A heat wave started on the 9th and continued for the next three days with the peak on the 12th when the absolute maximum air temperature (8.2°C above normal) and those of soil temperature in the dry field for the surface layer down to 10 cms. and the lowest relative humidity (24% below normal) were reported, whereas the highest values of evaporation from pan class A and Piche both in the free air at levels 1, 60 and 120 cms. above the ground and in the screen (2.0 mms. above normal) were recorded on the previous day. This heat wave was followed by a cold spell during which the lowest values of day time mean air temperature and Piche evaporation in the screen and at 1 cm. in the free air were observed on the 16th and the lowest maximum air temperature on the next day.

A prolonged cold spell started on the 21st and continued to the end of the month with peak on the 23rd when the highest daily means of relative humidity (12% above normal) and vapour pressure occurred as well as the lowest value of Piche evaporation at 60 cms. above ground, while the lowest values of Piche evaporation at 120 cms. and pan class A were noticed on the 28th.

The extreme soil temperatures at different depths in the three fields varied from those of last year by variable amounts not exceeding 4.1°C , whereas the absolute minima for air temperature at 5 cms. above the ground were lower by about 2°C in the three fields.

The means of the surface wind, at 2 metres above the ground level, of the day and night time were lower than those of June 1963 by 0.2 and 0.5 m/sec. respectively, while no material change was observed in the day time mean.

Compared with last year, the total radiation, mean evaporation of the day for both Piche and pan class A and total potential evaporation were less by 34 gm, cal./cm², 2.4, 1.98 and 7.5 mms. respectively, while the total actual duration of bright sunshine was more by 8.3 hours, and the total potential evapotranspiration for grass (Libia) more by 6.4 mms.

No material deviation from normal with regard to air temperature and relative humidity, but the mean evaporation from Piche in the screen was 2.0 mms. above normal.

REVIEW OF AGRO-METEOROLOGICAL STATION AT KHARGA

JUNE 1964

Compared with the normal values, this month was slightly warmer and markedly drier with frequent successive cool spells and heat waves.

A cool spell started on the 8th with the peak on the 9th when the absolute minima of air temperature at 5, 20 and 200 cms. (5.2°C below normal), and the lowest values of means of the day (1°C below normal), night time and day time, as well as those of soil temperatures for the surface layers down to 20 cms. of depth were recorded, while those of evaporation from pan class A and Piche both in the free air at levels 1, 60 and 120 cms. above the ground and in the screen (1.0 mm. above normal), occurred on the next day.

That cool spell was followed by a distinguished heat wave, which gave the absolute maximum air temperature (6.9°C above normal) and the highest values of the daily mean (4.7°C above normal), soil temperatures for the surface layers down to 20 cms. of depth and water vapour pressure deficit on the 12th as well as the lowest values of relative humidity 7% (25% below normal), the daily mean (17% below normal) and vapour pressure. The highest minima of air temperature at 5 and 20 cms. were reported on the next day, while that in the screen was associated with the peak of another heat wave on the 27th.

The lowest values of maximum air temperature (2.7°C below normal) happened with the peak of a cool spell on the 16th and that of vapour pressure deficit on the previous day, while the highest values of relative humidity (12% above normal), the daily mean (about normal) and vapour pressure were observed on the 18th.

A heat wave followed and had the peak on the 20th with the highest values of evaporation from pan class A and Piche in the free air and in the screen (29.4 mms. above normal).

The actual duration of bright sunshine was 93.5% of the possible duration.

The means of the maximum and minimum air temperatures were lower than normal by 0.2°C and 0.3°C respectively, while the daily mean was more by 1.4°C .

The daily mean relative humidity was 9% lower than normal, whereas the mean of Piche evaporation in the screen was higher by 12.5 mms.

**TABLE C. 1.—AIR TEMPERATURE AT 2 METRES ABOVE GROUND
JUNE — 1964**

| STATION | Air Temperature (°C) | | | | | Mean Duration in hours of daily air temperature above the following values | | | | | | | | | | |
|-------------------|----------------------|-----------|-----------------|-----------------|---------------|--|------|------|------|------|------|------|------|------|------|------|
| | Mean Max. | Mean Min. | Mean of the day | Night time mean | Day time mean | —5°C | 0°C | 5°C | 10°C | 15°C | 20°C | 25°C | 30°C | 35°C | 40°C | 45°C |
| El Kaar | 27.5 | 17.1 | 22.9 | 20.3 | 24.7 | 24.0 | 24.0 | 24.0 | 24.0 | 23.7 | 18.4 | 7.8 | 0.1 | 0.0 | 0.0 | 0.0 |
| Tahrir | 34.5 | 19.1 | 26.0 | 22.3 | 28.6 | 24.0 | 24.0 | 24.0 | 24.0 | 24.0 | 21.4 | 12.3 | 6.4 | 1.0 | 0.1 | 0.0 |
| Giza | 34.2 | 19.6 | 26.8 | 24.0 | 28.8 | 24.0 | 24.0 | 24.0 | 24.0 | 24.0 | 22.4 | 13.1 | 6.6 | 1.1 | 0.2 | 0.0 |
| Kharga | 38.7 | 23.0 | 31.4 | 28.4 | 33.8 | 24.0 | 24.0 | 24.0 | 24.0 | 24.0 | 23.8 | 21.4 | 13.5 | 7.2 | 8.6 | 0.1 |

TABLE C 2.—ABSOLUTE VALUES OF AIR TEMPERATURE AT 2 METRES ABOVE GROUND, ABSOLUTE MINIMUM AIR TEMPERATURE AT 5cms ABOVE GROUND OVER DIFFERENT FIELDS

JUNE — 1964

| STATION | Max. Temp. at 2 metres (°C) | | | | Min. Temp. at 2 metres (°C) | | | | Min. Temp. at 5 cms. above (°C) | | | |
|-------------------|-----------------------------|------|--------|------|-----------------------------|------|--------|------|---------------------------------|------|-------|------|
| | Highest | | Lowest | | Highest | | Lowest | | Dry soil | | Grass | |
| | Value | Date | Value | Date | Value | Date | Value | Date | Value | Date | Value | Date |
| El Kaar | 32.1 | 12 | 23.9 | 1 | 23.6 | 12 | 12.3 | 2 | 9.9 | 2 | — | — |
| Tahrir | 43.8 | 12 | 31.5 | 17 | 21.7 | 24 | 16.4 | 9 | 14.5 | 2 | — | — |
| Giza | 42.4 | 12 | 31.3 | 17 | 21.8 | 24 | 16.2 | 2.8 | 11.9 | 2 | 9.6 | 2 |
| Kharga | 45.6 | 12 | 36.2 | 16 | 28.7 | 21 | 17.4 | 9 | 15.6 | 9 | — | — |

TABLE C 3.—(SOLAR + SKY) RADIATION, DURATION OF BRIGHT SUNSHINE, RELATIVE HUMIDITY, VAPOUR PRESSURE AT 2 METRES ABOVE GROUND, EVAPORATION & RAINFALL

JUNE — 1964

| STATION | (Solar+Sky) Radiation gm. cal/cm ² | Duration of Bright Sunshine (hours) | | | Relative Humidity % | | | | | | Vapour pressure (mms) | | | | | | Evaporation(mms) | | Rainfall (mms) | | |
|----------|---|-------------------------------------|------------------------|----|---------------------|-------|-------------|-----------|--------|-------|-----------------------|---------|---------|------|--------|--------|------------------|-------------|----------------------|----------------------|------|
| | | Total Actual monthly | Total Possible monthly | % | Duration in hours | | Mean of day | 1200 U.T. | Lowest | Date | Mean of day | 1200 UT | Highest | Date | Lowest | Date | Piche | Pan class A | Total Amount Monthly | Max. Fall in one day | Date |
| | | | | | > 90% | > 80% | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | |
| El Kaar. | 607.1 | 380.5 | 425.1 | 90 | — | — | 73 | 66 | 29 | 12 | 16.3 | 17.1 | 20.0 | 26 | 8.7 | 6 | — | 9.94 | Tr. | Tr. | |
| Tahrir . | 671.9 | 370.6 | 422.3 | 88 | 1.6 | 5.7 | 59 | 30 | 10 | 12 | 13.7 | 11.2 | 18.6 | 29 | 6.1 | 12 | 17.7 | 13.00 | 0.0 | — | |
| Giza . . | 657.7 | 357.2 | 421.7 | 85 | 0.2 | 2.8 | 53 | 31 | 11 | 12 | 13.0 | 11.1 | 18.4 | 23 | 6.7 | 10 | 18.2 | 11.87 | Tr. | Tr. | |
| Kharga . | 613.9 | 383.0 | 409.7 | 93 | 0 | 0 | 23 | 15 | 7 | 11,12 | 7.6 | 7.4 | 14.0 | 18 | 4.0 | 2,8,11 | 40.8 | 21.32 | 0.0 | — | |

JUNE — 1964

*Printed at the General Organisation
for Government Printing Offices Cairo
Under-Secretary of State*

ALY SULTAN ALY
Chairman of the Board of Directors



UNITED ARAB REPUBLIC

MONTHLY WEATHER REPORT

VOLUME 7

NUMBER 7

JULY, 1964

U.D.C. 551, 506.1 (62)

METEOROLOGICAL DEPARTMENT
CAIRO

PUBLICATIONS OF THE METEOROLOGICAL DEPARTMENT OF THE UNITED ARAB REPUBLIC — CAIRO

In fulfilment of its duties, the U.A.R. Meteorological Department issues several reports and publications on weather, climate and agrometeorology. The principal publications are described on this page.

Orders for publications should be addressed to :

“The Director General, Meteorological Department, Kubri-el-Qubbeh — CAIRO”.

THE DAILY WEATHER REPORT

This report is issued daily by the Meteorological Department since the year 1901. It includes surface and upper air observations carried out by the relevant networks of the Republic at the principal hours of observations.

As from January 1968 this report was revised to include a condensed representative selection of surface and upper air observations besides the 1200 U.T. surface & 500 mb charts.

THE MONTHLY WEATHER REPORT

First issued in 1909, the Monthly Weather Report served to give a brief summary of the weather conditions that prevailed over Egypt during the month, with a table showing the mean values for few meteorological elements and their deviations from the normal values. From 1954 to 1957 this report was in a rapid state of development and extension resulting into a voluminous report on January 1958 giving surface, upper air, and agro-meteorological data for U.A.R.

As from January 1964, the Monthly Weather Report was pressed to give climatological data for a representative selection of synoptic stations.

THE AGRO-METEOROLOGICAL ABRIDGED MONTHLY REPORT

Gives a review of weather experienced in the agro-meteorological stations of the U.A.R. as well as monthly values of certain elements.

THE ANNUAL REPORT

This report gives annual values and statistics for the various meteorological elements, together with a summary of the weather conditions that prevailed during all months of the year.

CLIMATOLOGICAL NORMALS FOR EGYPT

A voluminous edition was issued in march 1968 which brings normals and mean values up till 1960.

METEOROLOGICAL RESEARCH BULLETIN

First issued in January 1969 on a bi-annual basis. It includes research works carried out by members of staff of “The Meteorological Institute for Research and Training” and the Operational Divisions of Meteorological Department.

TECHNICAL NOTES

As from October 1970, the Meteorological Department started to issue a new series of publications in the form of Technical Notes (non periodical) on subjects related to studies and applications of meteorology in different fields for the benefit of personnel working in these fields.

The first Technical Note I was issued in October 1970 on : Sandstorms & Duststorms in the U.A.R.

GENERAL SUMMARY OF WEATHER CONDITIONS

JULY 1964

Generally mild and humid in the northern parts, hot in the middle parts, excessively hot in the southern parts. Early morning mist over few localities of Lower Egypt and Cairo area districts.

GENERAL DESCRIPTION OF WEATHER

The prevailing weather was generally mild and rather humid in the northern parts, hot in the middle parts, excessively hot and dry in the southern parts. Early morning mist developed over few scattered localities of the Delta and Canal areas in several days and over the western vicinities of Cairo area most days of the month.

PRESSURE DISTRIBUTION

The prevailing pressure distributions over the surface map this month can be summarized in the following pressure systems.

— The Complex monsoon low pressure system over Iraq, Arabia and Sudan.

— The monsoon low over the great Sahara of Africa.

— The Anticyclonic ridge over Europe and west Mediterranean.

— The travelling northern deep depressions through north Urasia from west to east.

On the other hand the prevailing upper pressure systems at the 700 and 500 mb levels were confined in the two deep upper lows over north Atlantic and north Russia, together with a high pressure belt at the subtropical latitudes.

The penetration of the deep travelling low pressure systems through Urasia north of latitude 45°N and the approach of their secondaries into the Black Sea western

vicinities was accompanied by a north west oscillation of the complex monsoon low over Iraq, Arabia & Sudan. During this month four of these secondary depressions reached west of the Black Sea round the 8th, 13th, 22nd & 27th. Accordingly the complex monsoon low over the Middle East showed four gradual NW oscillations and operated over east Mediterranean round the 8th, 16th, 25th & 31st respectively.

It is worth to mention that the anticyclonic ridge extending from the Azores over west Europe, west and central Mediterranean regions showed minor southward displacements during the penetration of the Atlantic travelling depressions through Europe.

In the upper troposphere, the subtropical jet stream appeared over the U.A.R. during the whole month at about 160 mb level.

The highest wind speeds recorded in Mersa Matruh, Helwan & Aswan were 115, 80 & 91 Knots reported on the 1st, 13th & 8th respectively.

SURFACE WIND

The prevailing winds were light/moderate Nly in general. Fresh/strong winds blew most of day time intervals over scattered localities in the western sector of the Mediterranean and in the Red Sea districts.

No gales were reported during this month.

TEMPERATURE

Both maximum and minimum air temperature showed small variability and oscillated slightly round normal in general over all districts of the Republic.

The absolute maximum temperature for the Republic was 45.4°C reported at Kom Ombo & Aswan on the 23rd.

Cairo, August 1971

The absolute minimum temperature for the Republic was 15.1°C reported at El Kasr on the 5th.

PRECIPITATION

As usual, no precipitation was reported during this month.

M. F. TAHA

Under Secretary of State

Director General

Meteorological Department

SURFACE DATA

Table A 1.—MONTHLY VALUES OF THE ATMOSPHERIC PRESSURE, AIR TEMPERATURE, RELATIVE HUMIDITY, BRIGHT SUNSHINE DURATION & PICHE EVAPORATION

JULY — 1964

| STATION | Atmospheric Pressure (mbs) M.S.L. | | Air Temperature °C | | | | | | | | Relative Humidity % | | Bright Sunshine Duration (Hours) | | | Piche Evaporation mms. Mean | |
|-------------------|--------------------------------------|------------------------|--------------------|------------------------|----------|------------------------|----------|------|------------------------|------|------------------------|------|----------------------------------|--------------|----------------|--------------------------------|------|
| | | | Maximum | | Minimum | | Dry Bulb | | Wet Bulb | | | | | | | | |
| | Mean | D.F. Normal or Average | (A) Mean | D.F. Normal or Average | (B) Mean | D.F. Normal or Average | A+B 2 | Mean | D.F. Normal or Average | Mean | D.F. Normal or Average | Mean | D.F. Normal or Average | Total Actual | Total Possible | | % |
| Sallum | 1010.3 | +0.1 | 30.0 | -0.7 | 22.1 | +0.3 | 26.0 | 25.7 | -0.3 | 21.8 | +0.6 | 70 | +7 | — | — | — | 8.6 |
| Mersa Matruh. (A) | 1010.2 | +0.5 | 28.4 | -0.8 | 20.3 | +0.1 | 24.4 | 24.6 | -0.4 | 21.4 | -0.1 | 74 | +1 | 357.1 | 433.6 | 82.4 | 7.6 |
| Alexandria (A) | 1008.7 | +0.3 | 29.7 | +0.1 | 22.4 | -0.3 | 26.0 | 25.5 | -0.6 | 21.2 | -1.3 | 74 | +1 | 386.2 | 432.3 | 89.3 | 6.5 |
| Port Said. (A) | 1017.7 | 0.0 | 29.5 | -0.9 | 23.2 | -0.9 | 26.4 | 25.8 | -0.9 | 22.2 | -1.0 | 72 | -2 | 369.2 | 432.3 | 85.4 | 5.9 |
| El Arish. | 1007.7 | +0.4 | 29.8 | -0.8 | 21.1 | 0.0 | 25.4 | 25.6 | -0.8 | 22.3 | -0.7 | 74 | 0 | 376.7 | 431.4 | 87.3 | 5.5 |
| Ghazza. | 1007.3 | 0.0 | 28.0 | -0.7 | 20.9 | -0.6 | 24.4 | 25.0 | -0.8 | 22.3 | -0.7 | 78 | 0 | 367.0 | 433.6 | 84.6 | 4.5 |
| Tanta. | 1007.7 | — | 33.0 | — | 19.3 | — | 26.2 | 25.7 | — | 20.0 | — | 63 | — | 376.2 | 431.0 | 87.3 | 6.4 |
| Cairo. (A) | 1008.0 | 0.0 | 33.6 | -1.8 | 21.2 | -0.3 | 27.4 | 26.8 | -1.3 | 20.7 | -0.3 | 56 | +4 | — | — | — | 14.7 |
| Fayoum. | 1007.4 | — | 35.7 | — | 20.7 | — | 28.2 | 27.8 | — | 20.3 | — | 47 | — | — | — | — | 11.7 |
| Minya. (A) | 1007.3 | +0.4 | 35.5 | -1.4 | 19.9 | -0.3 | 27.7 | 27.8 | -0.8 | 20.6 | +0.4 | 49 | +5 | — | — | — | 11.5 |
| Assyout. (A) | 1007.1 | +0.5 | 34.5 | -2.4 | 21.5 | -0.8 | 28.0 | 28.8 | -1.1 | 19.3 | 0.0 | 37 | +5 | — | — | — | 19.9 |
| Luxor. (A) | 1004.7 | 0.0 | 39.3 | -1.4 | 23.9 | +0.3 | 31.6 | 32.1 | -0.9 | 20.2 | +0.4 | 29 | +5 | — | — | — | 14.2 |
| Aswan. (A) | 1004.9 | +0.4 | 41.1 | -0.8 | 25.0 | -1.1 | 33.0 | 33.2 | -0.4 | 18.1 | 0.0 | 16 | +1 | — | — | — | 22.5 |
| Siwa. | 1069.8 | +0.2 | 36.2 | -1.8 | 21.0 | -0.3 | 28.6 | 28.9 | +0.9 | 19.8 | +0.4 | 39 | +6 | — | — | — | 15.4 |
| Bahariya. | 1008.1 | +0.1 | 36.3 | -0.7 | 20.7 | +0.1 | 28.5 | 28.9 | -0.4 | 19.1 | -0.3 | 36 | +1 | — | — | — | 10.1 |
| Farafra. | 1009.5 | — | 35.1 | — | 20.1 | — | 27.6 | 28.6 | — | 17.8 | — | 29 | — | — | — | — | 22.7 |
| Dakhla. | 1006.0 | +0.2 | 36.5 | -2.1 | 22.1 | -1.0 | 29.3 | 30.2 | -0.6 | 17.9 | +0.2 | 24 | +3 | — | — | — | 23.9 |
| Kharga. | 1006.7 | — | 38.4 | — | 23.0 | — | 30.7 | 31.5 | — | 18.1 | — | 26 | — | 390.1 | 418.8 | 93.1 | 23.6 |
| Tor. | 1014.6 | +0.4 | 32.7 | -2.2 | 24.6 | +0.2 | 28.6 | 28.2 | -0.8 | 22.4 | -0.5 | 58 | -1 | — | — | — | 9.7 |
| Hurgada. | 1004.6 | +0.4 | 33.0 | +0.4 | 24.9 | +0.1 | 29.0 | 29.2 | -0.3 | 21.0 | -1.0 | 45 | -4 | — | — | — | 22.7 |
| Quesir | 1005.3 | +0.7 | 31.6 | -1.7 | 25.8 | -0.5 | 28.7 | 30.0 | 0.0 | 22.4 | +0.1 | 49 | 0 | — | — | — | 18.9 |

TABLE A2.— MAXIMUM AND MINIMUM AIR TEMPERATURE

JULY — 1964

| Station | Maximum Temperature °C | | | | | | | | | Grass Min. Temp. | | Minimum Temperature °C | | | | | | | | |
|-----------------------|------------------------|------|--------|------|----------------------------|-----|-----|-----|-----|------------------|----------------|------------------------|-----------|--------|-------|-----------------------------|----|----|-----|--|
| | Highest | Date | Lowest | Date | No. of Days with Max-Temp. | | | | | Mean | D. From Normal | Highest | Date | Lowest | Date | No. of Days with Min. Temp. | | | | |
| | | | | | >25 | >30 | >35 | >40 | >45 | | | | | | | <10 | <5 | <0 | <-5 | |
| Sallum | 33.5 | 8 | 26.0 | 4 | 31 | 18 | 0 | 0 | 0 | 21.6 | — | 23.8 | 26 | 19.4 | 5 | 0 | 0 | 0 | 0 | |
| Mersa Matruh . . (A) | 30.4 | 8 | 27.0 | 4.11 | 31 | 1 | 0 | 0 | 0 | — | — | 22.5 | 1 | 16.2 | 12 | 0 | 0 | 0 | 0 | |
| Alexandria . . . (A) | 31.7 | 29 | 28.0 | 4 | 31 | 11 | 0 | 0 | 0 | — | — | 24.8 | 30 | 17.2 | 11 | 0 | 0 | 0 | 0 | |
| Port Said . . . (A) | 33.5 | 8 | 27.4 | 5.12 | 31 | 10 | 0 | 0 | 0 | 22.8 | — | 25.2 | 23 | 21.3 | 5 | 0 | 0 | 0 | 0 | |
| El Arish | 32.1 | 9 | 28.3 | 5 | 31 | 14 | 0 | 0 | 0 | 19.9 | — | 24.0 | 30 | 18.8 | 5 | 0 | 0 | 0 | 0 | |
| Ghazza | 29.5 | 1.31 | 26.5 | 5 | 31 | 0 | 0 | 0 | 0 | 20.0 | — | 24.0 | 28 | 18.2 | 6 | 0 | 0 | 0 | 0 | |
| Tenta | 35.9 | 22 | 30.7 | 5 | 31 | 31 | 3 | 0 | 0 | — | — | 21.6 | 21.23 | 17.2 | 7.11 | 0 | 0 | 0 | 0 | |
| Cairo (A) | 37.4 | 1 | 31.2 | 5 | 31 | 31 | 5 | 0 | 0 | — | — | 24.5 | 1 | 18.8 | 5 | 0 | 0 | 0 | 0 | |
| Fayoum | 38.2 | 1.8 | 32.6 | 3 | 31 | 31 | 21 | 0 | 0 | 18.4 | — | 22.6 | 22 | 17.4 | 4 | 0 | 0 | 0 | 0 | |
| Minya (A) | 38.5 | 10 | 32.5 | 5 | 31 | 31 | 19 | 0 | 0 | 15.0 | — | 22.9 | 22 | 17.0 | 8 | 0 | 0 | 0 | 0 | |
| Assyout (A) | 39.3 | 10 | 32.2 | 5 | 31 | 31 | 20 | 0 | 0 | 19.6 | — | 23.5 | 18 | 19.5 | 6 | 0 | 0 | 0 | 0 | |
| Luxor (A) | 43.5 | 22 | 37.2 | 5 | 31 | 31 | 31 | 14 | 0 | — | — | 25.6 | 23,27,28* | 21.0 | 15 | 0 | 0 | 0 | 0 | |
| Aswan (A) | 45.4 | 23 | 37.4 | 5 | 31 | 31 | 31 | 24 | 1 | — | — | 27.0 | 18 | 21.7 | 6 | 0 | 0 | 0 | 0 | |
| Siwa | 38.5 | 8 | 33.3 | 11 | 31 | 31 | 25 | 0 | 0 | 20.2 | — | 22.8 | 31 | 18.4 | 11 | 0 | 0 | 0 | 0 | |
| Bahariya | 38.7 | 22 | 33.0 | 5 | 31 | 31 | 27 | 0 | 0 | 24.9 | — | 23.0 | 22.23 | 19.0 | 7.14 | 0 | 0 | 0 | 0 | |
| Farafra | 38.7 | 10 | 33.3 | 14 | 31 | 31 | 26 | 0 | 0 | 19.3 | — | 22.6 | 22 | 17.9 | 11.16 | 0 | 0 | 0 | 0 | |
| Dakhla | 41.0 | 10 | 34.7 | 5 | 31 | 31 | 30 | 3 | 0 | 17.2 | — | 26.8 | 23 | 18.2 | 16 | 0 | 0 | 0 | 0 | |
| Kharga | 41.8 | 10 | 35.7 | 4.5 | 31 | 31 | 31 | 3 | 0 | 22.0 | — | 27.4 | 23 | 19.8 | 16 | 0 | 0 | 0 | 0 | |
| Tor | 39.3 | 10 | 29.3 | 5.14 | 31 | 28 | 3 | 0 | 0 | — | — | 26.0 | 17.18 | 20.8 | 1.9 | 0 | 0 | 0 | 0 | |
| Hurghada | 37.0 | 1 | 30.6 | 6 | 31 | 31 | 5 | 0 | 0 | 23.4 | — | 27.8 | 17 | 21.5 | 1 | 0 | 0 | 0 | 0 | |
| Quseir | 35.0 | 1 | 29.1 | 6 | 31 | 30 | 0 | 0 | 0 | 20.0 | — | 27.7 | 18 | 22.8 | 6 | 0 | 0 | 0 | 0 | |

TABLE A 3.—SKY COVER AND RAINFALL

JULY — 1964

| Station | Mean Sky Cover Oct. | | | | | Rainfall mms. | | | | | | | | | | |
|--------------------------|---------------------|------------|------------|------------|---------------|-----------------|----------------|-------------------------|------|------------------------------------|------|------|------|-----|-----|-----|
| | 00 U.T. | 06 U.T. | 12 U.T. | 18 U.T. | Daily Mean | Total Amount | D. From Normal | Max. Fall in one day | | Number of Days with Amount of Rain | | | | | | |
| | | | | | | | | Amount | Date | <0.1 | ≥0.1 | ≥1.0 | ≥5.0 | ≥10 | ≥25 | ≥50 |
| Sallum | 0.6 | 1.1 | 0.7 | 0.4 | 0.6 | 0.0 | 0.0 | 0.0 | — | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Mersa Matruh . . . (A) | 1.1 | 2.4 | 0.9 | 1.4 | 1.4 | 0.0 | 0.0 | 0.0 | — | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Alexandria (A) | 1.3 | 2.3 | 0.8 | 1.0 | 1.2 | 0.0 | — Tr. | 0.0 | — | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Port Said (A) | 1.1 | 2.0 | 0.2 | 0.7 | 1.0 | 0.0 | 0.0 | 0.0 | — | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| El Arish | 3.1 | 3.5 | 0.4 | 2.9 | 1.8 | 0.0 | 0.0 | 0.0 | — | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ghazza | 3.6 | 4.2 | 1.0 | 2.0 | 2.6 | 0.0 | 0.0 | 0.0 | — | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Tanta | — | 1.2 | 0.7 | 0.2 | — | 0.0 | — Tr. | 0.0 | — | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Cairo (A) | 1.5 | 2.8 | 0.4 | 0.5 | 1.0 | 0.0 | — 0.0 | 0.0 | — | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Fayoum | — | 0.8 | 0.1 | 0.1 | — | 0.0 | 0.0 | 0.0 | — | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Minya (A) | 0.0 | 0.6 | 0.3 | 0.2 | 0.2 | 0.0 | 0.0 | 0.0 | — | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Assyout (A) | 0.1 | 0.2 | 0.1 | 0.1 | 0.1 | 0.0 | 0.0 | 0.0 | — | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Luxor (A) | 0.2 | 0.8 | 0.6 | 0.4 | 0.7 | 0.0 | 0.0 | 0.0 | — | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Aswan (A) | 0.3 | 1.0 | 1.0 | 0.8 | 0.7 | 0.0 | 0.0 | 0.0 | — | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Siwa | 0.0 | 1.0 | 0.1 | 0.8 | 0.2 | 0.0 | 0.0 | 0.0 | — | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Bahariya | 0.0 | 0.6 | 0.2 | 0.3 | 0.2 | 0.0 | — Tr. | 0.0 | — | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Farafra | 0.0 | 0.0 | 0.2 | 0.0 | 0.4 | 0.0 | 0.0 | 0.0 | — | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Dakhla | 0.1 | 0.6 | 0.5 | 0.4 | 0.4 | 0.0 | 0.0 | 0.0 | — | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Kharga | 0.0 | 0.7 | 0.8 | 0.7 | 0.5 | 0.0 | 0.0 | 0.0 | — | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Tor | 0.2 | 0.2 | 0.5 | 0.2 | 0.2 | 0.0 | 0.0 | 0.0 | — | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Hurghada | 0.4 | 0.4 | 0.3 | 0.3 | 0.3 | 0.0 | 0.0 | 0.0 | — | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Quseir | 0.0 | 0.4 | 0.3 | 0.2 | 0.3 | 0.0 | 0.0 | 0.0 | — | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

Table A 4. — DAYS OF OCCURRENCE OF MISCELLANEOUS WEATHER PHENOMENA.

JULY — 1964

| Station | Precipitation | | | | Frost | Thunderstorm | Mist Vis \geq 1000 metres | Fog Vis $<$ 1000 Metres | Haze Vis \leq 1000 Metres | Thick Haze Vis $<$ 1000 Metres | Dust or Sandrising Vis \geq 1000 Metres | Dust or Sandstorm Vis $<$ 1000 Metres | Gale | Clear Sky | Cloudy Sky |
|----------------------------|---------------|------|-------------|------|-------|--------------|-----------------------------|-------------------------|-----------------------------|--------------------------------|---|---------------------------------------|------|-----------|------------|
| | Rain | Snow | Ice Pellets | Hail | | | | | | | | | | | |
| Sallum | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 30 | 0 |
| Mersa Matruh (A) | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 1 | 0 | 0 | 0 | 0 | 22 | 0 |
| Alexandria (A) | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 24 | 0 |
| Port Said (A) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 25 | 0 |
| El Arish | 0 | 0 | 0 | 0 | 0 | 0 | 7 | 1 | 0 | 0 | 1 | 0 | 0 | 14 | 0 |
| Ghaza | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 9 | 0 |
| Tanta | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | — | — |
| Cairo (A) | 0 | 0 | 0 | 0 | 0 | 0 | 18 | 1 | 13 | 0 | 0 | 0 | 0 | 28 | 0 |
| Fayoum | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | — | 0 |
| Minya (A) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 31 | 0 |
| Assyout (A) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 0 | 1 | 0 | 0 | 31 | 0 |
| Luxor (A) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 31 | 0 |
| Aewan (A) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 0 | 28 | 0 |
| Siwa | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 31 | 0 |
| Bahariya | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 31 | 0 |
| Farafra | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 31 | 0 |
| Dakhla | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 3 | 0 | 0 | 30 | 0 |
| Kharga | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 6 | 0 | 0 | 29 | 0 |
| Tor | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 31 | 0 |
| Hurghada | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 0 | 0 | 31 | 0 |
| Quseir | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 31 | 0 |

**TABLE A 5.—NUMBER IN HOURS OF OCCURRENCES OF CONCURRENT SURFACE
WIND SPEED AND DIRECTION RECORDED WITHIN SPECIFIED RANGES**

JULY — 1964

| Station | calm (hours) | Variable (hours) | Unrecorded (hours) | Wind speed in knots | Number in hours of occurrences of wind blowing from the ranges of directions indicated | | | | | | | | | | | | | All directions |
|------------------------|--------------|------------------|--------------------|--|---|---------------------------|-------------------------|-----------------------|-------------------------|---------------------------|-------------------------|-------------------------|--------------------------|----------------------------|----------------------------|-----------------------------|-----------------------------|----------------|
| | | | | | 345 / 014 | 015 / 044 | 045 / 074 | 075 / 104 | 105 / 134 | 135 / 164 | 165 / 194 | 195 / 224 | 225 / 254 | 255 / 284 | 285 / 314 | 315 / 344 | | |
| Matruh (A) | 10 | 0 | 0 | 1-10 11-27 28-47 ≥ 48 All speeds | 63 91 0 0 154 | 15 1 0 0 16 | 0 0 0 0 0 | 0 0 0 0 0 | 0 0 0 0 0 | 0 0 0 0 0 | 0 0 0 0 0 | 0 0 0 0 0 | 29 8 0 0 37 | 106 71 0 0 177 | 88 262 0 0 350 | 301 433 0 0 734 | | |
| Alexandria . . (A) | 3 | 0 | 0 | 1-10 11-27 28-47 ≥ 48 All speeds | 61 50 0 0 111 | 5 5 0 0 10 | 3 0 0 0 3 | 0 0 0 0 0 | 0 0 0 0 0 | 0 0 0 0 0 | 4 0 0 0 4 | 9 0 0 0 9 | 2 9 0 0 2 | 26 147 0 0 35 | 64 231 0 0 211 | 125 442 0 0 356 | 299 442 0 0 741 | |
| Port Said . . (A) | 0 | 2 | 0 | 1-10 11-27 28-47 ≥ 48 All speeds | 88 37 0 0 125 | 8 2 0 0 10 | 5 0 0 0 5 | 1 0 0 0 1 | 3 0 0 0 3 | 3 0 0 0 3 | 1 0 0 0 1 | 1 8 0 0 2 | 27 22 0 0 35 | 107 48 0 0 129 | 59 188 0 0 107 | 133 306 0 0 321 | 436 306 0 0 742 | |
| Izmit | 0 | 27 | 0 | 1-10 11-27 28-47 ≥ 48 All speeds | 26 3 0 0 29 | 9 8 0 0 17 | 5 0 0 0 5 | 4 0 0 0 4 | 16 0 0 0 16 | 169 1 0 0 170 | 51 0 0 0 51 | 14 2 0 0 16 | 34 6 0 0 40 | 92 16 0 0 108 | 122 31 0 0 153 | 92 16 0 0 108 | 634 83 0 0 717 | |
| Antalya | 17 | 3 | 0 | 1-10 11-27 28-47 ≥ 48 All speeds | 69 1 0 0 70 | 32 1 0 0 33 | 4 0 0 0 4 | 1 0 0 0 1 | 2 0 0 0 2 | 0 0 0 0 0 | 0 0 0 0 0 | 1 0 0 0 1 | 95 0 0 0 95 | 75 0 0 0 75 | 181 1 0 0 182 | 261 0 0 0 261 | 721 3 0 0 724 | |
| Cairo (A) | 12 | 5 | 11 | 1-10 11-27 28-47 ≥ 48 All speeds | 82 77 0 0 159 | 78 36 0 0 114 | 26 4 0 0 30 | 5 2 0 0 7 | 5 2 0 0 7 | 1 1 0 0 2 | 0 0 0 0 0 | 0 0 0 0 0 | 5 2 0 0 5 | 45 19 0 0 47 | 79 110 0 0 98 | 137 253 0 0 247 | 463 253 0 0 716 | |
| Suez | 16 | 0 | 0 | 1-10 11-27 28-47 ≥ 48 All speeds | 443 0 0 0 443 | 13 0 0 0 13 | 0 0 0 0 0 | 0 0 0 0 0 | 0 0 0 0 0 | 0 0 0 0 0 | 10 0 0 0 10 | 0 0 0 0 0 | 12 0 0 0 12 | 19 0 0 0 19 | 34 0 0 0 34 | 201 6 0 0 207 | 722 6 0 0 728 | |
| Marsa Matruh . . . (A) | 9 | 8 | 0 | 1-10 11-27 28-47 ≥ 48 All speeds | 67 10 0 0 77 | 3 0 0 0 3 | 3 0 0 0 3 | 3 0 0 0 3 | 2 0 0 0 2 | 7 0 0 0 7 | 2 0 0 0 2 | 5 1 0 0 6 | 5 0 0 0 5 | 2 0 0 0 2 | 53 261 0 0 53 | 303 272 0 0 364 | 455 272 0 0 727 | |
| Sidi Barrani . . . (A) | 0 | 0 | 1 | 1-10 11-27 28-47 ≥ 48 All speeds | 20 4 0 0 24 | 4 0 0 0 4 | 1 0 0 0 1 | 3 0 0 0 3 | 3 0 0 0 3 | 1 0 0 0 1 | 2 1 0 0 3 | 3 1 0 0 3 | 13 2 0 0 15 | 166 5 0 0 171 | 242 81 0 0 333 | 140 51 0 0 191 | 598 145 0 0 743 | |

Table A 5. (contd.)—NUMBER IN HOURS OF OCCURRENCES OF CONCURRENT SURFACE WIND SPEED AND DIRECTION RECORDED WITHIN SPECIFIED RANGES

JULY — 1964

| Station | calm (hours) | Variable (hours) | Unrecorded (hours) | Wind speed in knots | Number in hours of occurrences of wind blowing from the ranges of directions indicated | | | | | | | | | | | | | All directions |
|--------------------|--------------|------------------|--------------------|--|---|----------------------------|-------------------------|-------------------------|-------------------------|-------------------------|---------------------------|-------------------------|-------------------------|-------------------------|---------------------------|-----------------------------|-----------------------------|----------------|
| | | | | | 345 / 014 | 015 / 044 | 045 / 074 | 075 / 104 | 105 / 134 | 135 / 164 | 165 / 194 | 195 / 224 | 225 / 254 | 255 / 284 | 285 / 314 | 315 / 344 | | |
| Luxor | 6 | 0 | 9 | 1-10 11-27 28-47 ≥ 48 All speeds | 15 1 0 0 16 | 11 0 0 0 11 | 4 0 0 0 4 | 4 0 0 0 4 | 8 0 0 0 8 | 35 0 0 0 35 | 116 0 0 0 116 | 76 2 0 0 78 | 36 4 0 0 40 | 71 2 0 0 73 | 98 4 0 0 102 | 220 22 0 0 242 | 694 35 0 0 729 | |
| Aswan | 0 | 0 | 45 | 1-10 11-27 28-47 ≥ 48 All speeds | 141 70 0 0 211 | 55 7 0 0 62 | 3 0 0 0 3 | 4 0 0 0 4 | 0 0 0 0 0 | 6 0 0 0 6 | 2 0 0 0 2 | 2 0 0 0 2 | 15 0 0 0 15 | 50 4 0 0 54 | 84 30 0 0 114 | 177 49 0 0 226 | 539 160 0 0 699 | |
| Siwa | 18 | 1 | 0 | 1-10 11-27 28-47 ≥ 48 All speeds | 201 30 0 0 231 | 121 33 0 0 154 | 70 2 0 0 12 | 35 0 0 0 35 | 6 0 0 0 6 | 3 0 0 0 3 | 3 0 0 0 3 | 0 0 0 0 0 | 0 0 0 0 0 | 11 0 0 0 11 | 45 9 0 0 54 | 118 38 0 0 156 | 615 111 0 0 726 | |
| Dakhla | 0 | 3 | 1 | 1-10 11-27 28-47 ≥ 48 All speeds | 76 8 0 0 84 | 131 10 0 0 141 | 12 0 0 0 12 | 2 0 0 0 2 | 4 0 0 0 4 | 4 0 0 0 4 | 4 0 0 0 4 | 15 0 0 0 15 | 9 0 0 0 9 | 57 0 0 0 57 | 142 0 0 0 142 | 260 6 0 0 266 | 711 2 0 0 713 | |
| Hurghada | 4 | 4 | 0 | 1-10 11-27 28-47 ≥ 48 All speeds | 17 82 0 0 99 | 15 4 0 0 19 | 5 0 0 0 5 | 10 0 0 0 10 | 10 1 0 0 11 | 24 0 0 0 24 | 3 0 0 0 3 | 5 0 0 0 5 | 2 0 0 0 2 | 9 11 0 0 20 | 69 92 0 0 161 | 23 348 6 0 377 | 180 53 0 0 713 | |
| Queir | 12 | 5 | 60 | 1-10 11-27 28-47 ≥ 48 All speeds | 88 123 0 0 211 | 18 3 0 0 21 | 8 0 0 0 8 | 2 0 0 0 2 | 2 0 0 0 2 | 5 0 0 0 5 | 4 0 0 0 4 | 0 0 0 0 0 | 4 3 0 0 7 | 22 1 0 0 23 | 58 4 0 0 62 | 151 171 0 0 322 | 301 301 0 0 602 | |

UPPER AIR CLIMATOLOGICAL DATA

Table B 1.—MONTHLY MEANS AND MONTHLY ABSOLUTE HIGHER & LOWER VALUES OF ALTITUDE, AIR TEMPERATURE & DEW POINT AT STANDARD AND SELECTED PRESSURE SURFACES

JULY — 1964

| Station | Pressure Surface Millibar | Altitude of Pressure Surface (gpm) | | | | Temperature (°C) | | | | Dew Point (°C) | |
|-------------------------|---------------------------|------------------------------------|----------|----------|----------|------------------|-------|---------|--------|----------------|-------|
| | | N | Mean | Highest | Lowest | N | Mean | Highest | Lowest | N | Mean |
| METAR Station 0000 U.T. | Surface | 27 | * 1009mb | * 1013mb | * 1006mb | 27 | 22.8 | 24.5 | 19.2 | 27 | 19.9 |
| | 1000 | 27 | 121 | 157 | 98 | 27 | 22.4 | 24.1 | 19.0 | 27 | 19.4 |
| | 850 | 27 | 1525 | 1570 | 1493 | 27 | 17.8 | 22.2 | 13.4 | 22 | 1.8 |
| | 700 | 27 | 3162 | 3213 | 3108 | 27 | 10.8 | 15.2 | 7.1 | 6 | -6.5 |
| | 600 | 27 | 4430 | 4483 | 4353 | 27 | 4.1 | 8.0 | -1.7 | — | — |
| | 500 | 27 | 5673 | 5963 | 5793 | 27 | -4.4 | 0.6 | -9.5 | — | — |
| | 400 | 27 | 7608 | 7710 | 7496 | 27 | -15.1 | -11.7 | -21.1 | — | — |
| | 300 | 25 | 9735 | 9844 | 9639 | 25 | -28.4 | -25.8 | -32.6 | — | — |
| | 200 | 19 | 12512 | 12599 | 12352 | 19 | -49.0 | -45.6 | -52.8 | — | — |
| | 150 | 14 | 14309 | 14432 | 14162 | 14 | -63.8 | -60.0 | -64.8 | — | — |
| | 100 | 9 | 16746 | 16859 | 16658 | 9 | -73.9 | -70.7 | -77.0 | — | — |
| | 70 | 5 | 18846 | 18900 | 18800 | 5 | -68.5 | -64.5 | -72.0 | — | — |
| | 50 | 3 | 20893 | 20918 | 20861 | 3 | -58.8 | -57.6 | -60.9 | — | — |
| | 30 | 2 | 24192 | 24196 | 24188 | 2 | -50.6 | -50.5 | -50.5 | — | — |
| | 20 | 1 | 26871 | — | — | 1 | -45.2 | — | — | — | — |
| | 10 | — | — | — | — | — | — | — | — | — | — |
| METAR Station 0000 U.T. | Surface | 31 | * 992mb | * 995mb | * 987mb | 31 | 22.5 | 28.6 | 20.4 | 31 | 17.0 |
| | 1000 | 31 | 74 | 100 | 37 | — | — | — | — | — | — |
| | 850 | 31 | 1478 | 1498 | 1463 | 31 | 19.5 | 23.3 | 15.9 | 25 | -3.8 |
| | 700 | 31 | 3126 | 3172 | 3107 | 31 | 13.0 | 162 | 8.2 | — | — |
| | 600 | 31 | 4404 | 4461 | 4356 | 31 | 5.9 | 8.8 | 1.0 | — | — |
| | 500 | 31 | 5870 | 5920 | 5803 | 31 | -3.2 | 1.0 | -9.3 | 2 | -21.3 |
| | 400 | 31 | 7605 | 7650 | 7526 | 31 | -13.2 | -9.7 | -17.2 | 2 | -27.6 |
| | 300 | 31 | 9731 | 9788 | 9660 | 31 | -28.0 | -24.5 | -31.2 | — | — |
| | 200 | 31 | 12620 | 12601 | 12451 | 31 | -49.2 | -45.7 | -52.3 | — | — |
| | 150 | 31 | 14349 | 14461 | 14275 | 31 | -62.6 | -58.9 | -65.3 | — | — |
| | 100 | 31 | 16768 | 16887 | 16690 | 31 | -75.1 | -64.6 | -78.5 | — | — |
| | 70 | 23 | 18850 | 18960 | 18700 | 23 | -70.7 | -65.1 | -75.7 | — | — |
| | 50 | 20 | 20897 | 20985 | 20841 | 20 | -59.3 | -53.8 | -63.1 | — | — |
| | 30 | 12 | 24198 | 24211 | 24062 | 12 | -52.7 | -47.2 | -55.2 | — | — |
| | 20 | 9 | 26772 | 26854 | 26709 | 9 | 47.9 | -45.1 | -50.0 | — | — |
| | 10 | 3 | 31424 | 31505 | 31384 | 3 | -39.0 | -37.3 | -40.7 | — | — |
| METAR Station 0000 U.T. | Surface | 30 | * 982mb | * 984mb | * 978mb | 30 | 27.1 | 30.0 | 24.0 | 30 | 6.5 |
| | 1000 | — | — | — | — | — | — | — | — | — | — |
| | 850 | 30 | 1472 | 1497 | 1448 | 30 | 24.7 | 31.2 | 19.2 | 23 | 2.2 |
| | 700 | 30 | 3137 | 3169 | 3097 | 30 | 13.0 | 17.1 | 7.5 | 19 | -2.1 |
| | 600 | 30 | 4412 | 4454 | 4355 | 30 | 4.4 | 7.0 | 0.3 | 16 | -6.1 |
| | 500 | 30 | 5872 | 5915 | 5811 | 30 | -5.7 | 0.1 | -9.8 | 18 | -15.3 |
| | 400 | 30 | 7593 | 7641 | 7542 | 30 | -14.5 | -11.7 | -20.4 | 9 | -26.8 |
| | 300 | 30 | 9711 | 9786 | 9652 | 30 | -29.4 | -24.4 | -33.8 | 1 | -38.0 |
| | 200 | 29 | 12482 | 12587 | 12404 | 29 | -51.0 | -47.3 | -53.7 | — | — |
| | 150 | 29 | 14306 | 14429 | 14201 | 29 | -64.5 | -58.7 | -67.7 | — | — |
| | 100 | 28 | 16693 | 16884 | 16591 | 28 | -77.1 | -72.5 | -79.4 | — | — |
| | 70 | 21 | 18774 | 18930 | 18650 | 21 | -71.1 | -66.1 | -79.0 | — | — |
| | 50 | 17 | 20835 | 20988 | 20680 | 17 | -60.7 | -57.7 | -66.6 | — | — |
| | 30 | 15 | 24076 | 24291 | 23882 | 15 | -53.4 | -47.2 | -58.0 | — | — |
| | 20 | 9 | 26736 | 26822 | 26528 | 9 | -48.4 | -45.6 | -57.5 | — | — |
| | 10 | 2 | 31283 | 31466 | 31100 | 2 | -42.2 | -37.3 | -47.2 | — | — |

N — The number of cases the element has been observed during the month.

* The atmospheric pressure corrected to the elevation of the radiosonde stations.

UPPER AIR CLIMATOLOGICAL DATA

TABLE B 1 (contd.).—MONTHLY MEANS AND MONTHLY ABSOLUTE HIGHER & LOWER VALUES OF ALTITUDE, AIR TEMPERATURE & DEW POINT AT STANDARD AND SELECTED PRESSURE SURFACES

JULY — 1964

| Station | Pressure Surface (Millibar) | Altitude of Pressure Surface (gpm) | | | | Temperature (°C) | | | | Dew Point (°C) | |
|------------------------|-----------------------------|------------------------------------|--------|---------|--------|------------------|-------|---------|--------|----------------|-------|
| | | N | Mean | Highest | Lowest | N | Mean | Highest | Lowest | N | Mean |
| Mersa Matruh 1200 U.T. | Surface | 26 | 1009* | 1013md | 1007mb | 26 | 26.5 | 27.8 | 25.0 | 26 | 20.9 |
| | 1000 | 26 | 123 | 158 | 107 | 26 | 25.7 | 27.7 | 24.0 | 26 | 19.8 |
| | 850 | 26 | 1533 | 1562 | 1501 | 26 | 17.9 | 20.6 | 13.8 | 26 | 2.4 |
| | 700 | 26 | 3167 | 3209 | 3119 | 26 | 11.7 | 18.0 | 7.2 | 2 | -12.2 |
| | 600 | 26 | 4441 | 4486 | 4370 | 26 | 4.9 | 9.1 | 0.6 | — | — |
| | 500 | 26 | 5903 | 5953 | 5811 | 26 | -3.8 | 0.6 | -9.7 | — | — |
| | 400 | 25 | 7629 | 7701 | 7499 | 25 | -14.4 | -12.0 | -20.0 | — | — |
| | 300 | 22 | 9746 | 9843 | 96.0 | 22 | -28.8 | -25.4 | -36.2 | — | — |
| | 200 | 19 | 12541 | 12707 | 12419 | 19 | -48.6 | -45.5 | -51.2 | — | — |
| | 150 | 11 | 14385 | 14479 | 14306 | 11 | -61.5 | -59.3 | -63.0 | — | — |
| | 100 | 7 | 16822 | 16917 | 16750 | 7 | -74.0 | -72.1 | -77.8 | — | — |
| | 70 | 3 | 18893 | 18940 | 18840 | 3 | -67.7 | -67.0 | -77.8 | — | — |
| | 50 | 1 | 21030 | — | — | 1 | -55.0 | — | -68.2 | — | — |
| | 30 | 1 | 24350 | — | — | 1 | -48.3 | — | — | — | — |
| | 20 | 1 | 27053 | — | — | 1 | -43.0 | — | — | — | — |
| | 10 | — | — | — | — | — | — | — | — | — | — |
| Helwan 1200 U.T. | Surface | 31 | 991*mb | 995*mb | 988*mb | 31 | 32.9 | 38.2 | 29.5 | 31 | 12.4 |
| | 1000 | — | — | — | — | — | — | — | — | — | — |
| | 850 | 31 | 1490 | 1520 | 1471 | 31 | 19.5 | 23.2 | 16.7 | 26 | 1.7 |
| | 700 | 31 | 3138 | 3188 | 3111 | 31 | 13.1 | 18.6 | 8.9 | 1 | -6.0 |
| | 600 | 31 | 4416 | 4482 | 4375 | 31 | 6.0 | 9.4 | 1.5 | — | — |
| | 500 | 31 | 5886 | 5950 | 5825 | 31 | -2.8 | 1.3 | -6.8 | — | — |
| | 400 | 31 | 7623 | 7698 | 7542 | 31 | -12.8 | -9.6 | -17.3 | — | — |
| | 300 | 30 | 9753 | 9839 | 9682 | 30 | -27.1 | -23.3 | -30.0 | — | — |
| | 200 | 30 | 12556 | 12783 | 12478 | 30 | -47.9 | -42.8 | -51.0 | — | — |
| | 150 | 28 | 14398 | 14596 | 14288 | 28 | -61.1 | -54.0 | -64.2 | — | — |
| | 100 | 26 | 16829 | 17073 | 16698 | 26 | -75.1 | -69.3 | -77.5 | — | — |
| | 70 | 19 | 18917 | 19150 | 18830 | 19 | -71.1 | -63.7 | -76.3 | — | — |
| | 50 | 14 | 20962 | 21115 | 20883 | 14 | -59.1 | -55.6 | -71.2 | — | — |
| | 30 | 9 | 24214 | 24317 | 24102 | 9 | -52.1 | -50.0 | -57.5 | — | — |
| | 20 | 6 | 26883 | 26991 | 26819 | 6 | -47.7 | -45.0 | -55.2 | — | — |
| | 10 | 3 | 31501 | 31670 | 31308 | 3 | -42.4 | -37.4 | -50.6 | — | — |
| Aswan 1200 U.T. | Surface | 31 | 983*mb | 985*mb | 979*mb | 31 | 39.6 | 43.0 | 36.2 | 31 | 13.1 |
| | 1000 | — | — | — | — | — | — | — | — | — | — |
| | 850 | 31 | 1490 | 1515 | 1471 | 21 | 25.6 | 32.6 | 20.1 | 29 | -0.2 |
| | 700 | 31 | 3160 | 3186 | 3107 | 31 | 13.8 | 19.9 | 8.2 | 22 | -4.2 |
| | 600 | 31 | 4438 | 4481 | 4370 | 31 | 5.5 | 8.1 | 1.4 | 17 | -7.2 |
| | 500 | 31 | 5899 | 5964 | 5826 | 31 | -5.0 | 0.7 | -9.1 | 18 | -16.2 |
| | 400 | 31 | 7626 | 7685 | 7557 | 31 | -14.0 | -9.6 | -18.6 | 10 | -28.2 |
| | 300 | 31 | 9752 | 9842 | 9677 | 31 | -28.4 | -24.2 | -30.8 | — | — |
| | 200 | 31 | 12528 | 12685 | 12443 | 31 | -49.4 | -44.8 | -51.4 | — | — |
| | 150 | 31 | 14364 | 14553 | 14252 | 31 | -63.2 | -59.0 | -65.7 | — | — |
| | 100 | 30 | 16761 | 17000 | 16639 | 30 | -75.3 | -68.5 | -80.4 | — | — |
| | 70 | 23 | 18879 | 19120 | 18710 | 23 | -70.1 | -65.7 | -80.8 | — | — |
| | 50 | 16 | 20930 | 21778 | 20736 | 16 | -58.5 | -56.2 | -61.5 | — | — |
| | 30 | 12 | 24224 | 24484 | 24016 | 12 | -49.8 | -46.5 | -52.8 | — | — |
| | 20 | 8 | 26927 | 27188 | 26689 | 8 | -44.5 | -40.3 | -49.8 | — | — |
| | 10 | 2 | 31770 | 31902 | 31639 | 2 | -38.9 | -37.7 | -40.1 | — | — |

N = The number of cases the element has been observed during the month.

* The atmospheric pressure corrected to the elevation of the radiosonde stations.

**TABLE B 2.—MEAN AND EXTREME VALUES OF THE FREEZING LEVEL AND THE TROPOPAUSE ;
THE HIGHEST WIND SPEED IN THE UPPER AIR**

JULY — 1964

| Station | Freezing Level | | | | | | | | | First Tropopause | | | | | | | | | Highest wind speed | | | | |
|-----------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|------------------|----------------|------------------|----------------|----------------|------------------|----------------|----------------|------------------|--------------------|----------------|----------------------|----------------|-----|
| | Mean | | | Highest | | | Lowest | | | Mean | | | Highest | | | Lowest | | | Altitude (gpm) | Pressure (mb.) | Direction (000-360)° | Speed in Knots | |
| | Altitude (gpm) | Pressure (mb.) | Dew point (°C) | Altitude (gpm) | Pressure (mb.) | Dew Point (°C) | Altitude (gpm) | Pressure (mb.) | Dew Point (°C) | Altitude (gpm) | pressure (mb.) | Temperature (°C) | Altitude (gpm) | Pressure (mb.) | Temperature (°C) | Altitude (gpm) | Pressure (mb.) | Temperature (°C) | | | | | |
| 0000 U.T. | (N) | (N) | (N) | | | | | | | (N) | (N) | (N) | | | | | | | | | | | |
| | M. Matruh | 5119 (27) | 555 (27) | — — | 6050 | 494 | — | 4050 | 622 | — | 16521 (5) | 104 (5) | -73.7 (5) | 17550 | 87 | -79.2 | 15200 | 128 | -69.0 | 9800 | 294 | 280 | 113 |
| | Helwan | 5383 (31) | 532 (30) | -19.1 (1) | 6010 | 493 | — | 4590 | 584 | — | 17011 (24) | 96 (24) | -74.0 (24) | 18350 | 77 | -83.3 | 15500 | 122 | -75.6 | 11400 | — | 220 | 70 |
| | Aswan | 5067 (30) | 555 (30) | -10.0 (17) | 5900 | 498 | — | 4450 | 695 | -13.0 | 16488 (26) | 105 (26) | 77.0 (26) | 18230 | 79 | -77.3 | 14600 | 141 | -68.2 | 15570 | 121 | 110 | 80 |
| 1200 U.T. | (N) | (N) | (N) | | | | | | | (N) | (N) | (N) | | | | | | | | | | | |
| | M. Matruh | 5321 (26) | 536 (26) | — — | 6000 | 495 | — | 4580 | 584 | — | 16506 (3) | 103 (3) | -72.5 (3) | 16825 | 100 | -72.1 | 16210 | 110 | -72.3 | 13100 | — | 240 | 115 |
| | Helwan | 5371 (31) | 542 (31) | — — | 6160 | 486 | — | 4610 | 584 | — | 17365 (19) | 86 (19) | -77.4 (19) | 19500 | 66 | -76.9 | 15270 | 110 | -73.4 | 15720 | 117 | 190 | 80 |
| | Aswan | 5184 (31) | 547 (31) | -10.5 (18) | 6010 | 493 | — | 4600 | 585 | — | 15928 (26) | 104 (26) | -73.2 (26) | 17900 | 84 | -77.1 | 15240 | 126 | -70.4 | 16600 | 104 | 130 | 91 |

N — The number of cases the element has been observed during the month .

TABLE B 8.— NUMBER OF OCCURRENCES OF WIND DIRECTION WITHIN SPECIFIED RANGES AND THE MEAN SCALAR WIND SPEED AT THE STANDARD AND SELECTED PRESSURE SURFACES

MERSA MATRUH (A) - JULY 1964

| Time | Pressure Surface Millibar | Wind between ranges of direction (000-360)* | | | | | | | | | | | | | | | | Number of calm winds | Total number of observations (TN) | Mean scalar wind speed (Knots) | | | | |
|-----------|------------------------------|---|------|-----|------|-----|------|-----|------|-----|------|-----|------|---|------|----|------|-------------------------|--------------------------------------|-----------------------------------|----|---|----|----|
| | | 345 | 015 | 045 | 075 | 105 | 135 | 165 | 195 | 225 | 255 | 285 | 315 | | | | | | | | | | | |
| | | / | / | / | / | / | / | / | / | / | / | / | / | | | | | | | | | | | |
| | | 014 | 044 | 074 | 104 | 134 | 164 | 194 | 224 | 254 | 284 | 314 | 344 | | | | | | | | | | | |
| N | (ff) | N | (ff) | N | (ff) | N | (ff) | N | (ff) | N | (ff) | N | (ff) | N | (ff) | N | (ff) | N | (ff) | | | | | |
| m | m | m | m | m | m | m | m | m | m | m | m | m | m | m | m | m | m | m | m | | | | | |
| 0000 U.T. | Surface | 3 | 9 | 1 | 14 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 3 | 9 | 8 | 8 | 9 | 11 | 3 | 27 | 9 |
| | 1000 | 3 | 13 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 1 | 11 | 15 | 12 | 7 | 11 | 1 | 27 | 11 |
| | 850 | 8 | 16 | 1 | 3 | 1 | 8 | 0 | — | 0 | — | 0 | — | 0 | — | 4 | 14 | 3 | 14 | 10 | 14 | 0 | 27 | 14 |
| | 700 | 4 | 15 | 1 | 2 | 0 | — | 0 | — | 0 | — | 0 | — | 1 | 11 | 4 | 17 | 2 | 4 | 11 | 14 | 0 | 27 | 13 |
| | 600 | 1 | 21 | 2 | 13 | 0 | — | 0 | — | 0 | — | 0 | — | 1 | 11 | 3 | 20 | 9 | 16 | 7 | 12 | 4 | 15 | 15 |
| | 500 | 2 | 8 | 2 | 16 | 0 | — | 0 | — | 0 | — | 0 | — | 3 | 13 | 5 | 20 | 7 | 20 | 5 | 21 | 3 | 18 | 27 |
| | 400 | 1 | 11 | 1 | 8 | 0 | — | 0 | — | 1 | 8 | 0 | — | 2 | 8 | 5 | 21 | 7 | 24 | 8 | 31 | 2 | 26 | 0 |
| | 300 | 0 | — | 0 | — | 1 | 9 | 0 | — | 1 | 9 | 0 | — | 2 | 30 | 7 | 25 | 8 | 32 | 4 | 62 | 1 | 16 | 0 |
| | 200 | 0 | — | 0 | — | 0 | — | 0 | — | 1 | 21 | 0 | — | 1 | 27 | 5 | 28 | 5 | 46 | 0 | — | 0 | — | 0 |
| | 150 | 0 | — | 0 | — | 0 | — | 0 | — | 1 | 15 | 1 | 35 | 4 | 29 | 2 | 92 | 0 | — | 0 | — | 0 | — | 0 |
| | 100 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 1 | 14 | 2 | 34 | 0 | — | 0 | — | 0 | — | 0 | — | 0 |
| | 70 | 0 | — | 0 | — | 0 | — | 0 | — | 1 | 10 | 0 | — | 1 | 6 | 0 | — | 0 | — | 0 | — | 0 | — | 0 |
| | 60 | 0 | — | 0 | — | 0 | — | 1 | 16 | 0 | — | 1 | 12 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 |
| | 50 | 0 | — | 0 | — | 0 | — | 1 | 30 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 |
| 40 | 0 | — | 0 | — | 0 | — | 1 | 29 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | |
| 30 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | |
| 20 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | |
| 10 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | |
| 1800 U.T. | Surface | 7 | 14 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 4 | 16 | 15 | 17 | 0 | 26 | 16 |
| | 1000 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 5 | 18 | 21 | 17 | 0 | 26 | 17 |
| | 850 | 1 | 12 | 1 | 14 | 0 | — | 0 | — | 1 | 4 | 0 | — | 0 | — | 0 | — | 4 | 10 | 12 | 12 | 0 | 26 | 12 |
| | 700 | 4 | 15 | 1 | 17 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 1 | 18 | 2 | 11 | 6 | 11 | 0 | 26 | 12 |
| | 600 | 1 | 16 | 2 | 9 | 0 | — | 0 | — | 0 | — | 0 | — | 1 | 15 | 8 | 16 | 8 | 14 | 4 | 10 | 0 | 26 | 14 |
| | 500 | 1 | 17 | 2 | 18 | 1 | 8 | 0 | — | 0 | — | 0 | — | 4 | 12 | 13 | 16 | 4 | 18 | 1 | 21 | 0 | 26 | 16 |
| | 400 | 1 | 7 | 0 | — | 0 | — | 0 | — | 1 | 8 | 0 | — | 1 | 10 | 6 | 25 | 10 | 19 | 5 | 28 | 0 | 24 | 21 |
| | 300 | 0 | — | 0 | — | 0 | — | 0 | — | 1 | 7 | 1 | 5 | 4 | 21 | 3 | 23 | 10 | 27 | 2 | 57 | 0 | 21 | 26 |
| | 200 | 0 | — | 0 | — | 0 | — | 0 | — | 2 | 14 | 1 | 24 | 4 | 34 | 3 | 17 | 1 | 47 | 1 | 32 | 0 | 12 | 26 |
| | 150 | 0 | — | 0 | — | 0 | — | 0 | — | 1 | 37 | 4 | 26 | 2 | 44 | 1 | 15 | 1 | 96 | 0 | — | 0 | 9 | 37 |
| | 100 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 2 | 28 | 0 | — | 1 | 26 | 1 | 57* | 0 | — | 0 | 4 | 33 |
| | 70 | 0 | — | 0 | — | 0 | — | 0 | — | 1 | 44 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | 1 | 44 |
| | 60 | 0 | — | 0 | — | 0 | — | 0 | — | 1 | 32 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | 1 | 32 |
| | 50 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| 40 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | |
| 30 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | |
| 20 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | |
| 10 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | |

N — The number of cases the element has been observed during the month.

TN — The total number of cases the wind has been observed for all directions during the month

TABLE B 3 (contd.)—NUMBER OF OCCURRENCES OF WIND DIRECTION WITHIN SPECIFIED RANGES AND THE MEAN SCALAR WIND SPEED AT THE STANDARD AND SELECTED PRESSURE SURFACES.

HELWAN—JULY 1964

| Time | Pressure Surface (Millibar.) | Wind between ranges of direction (000—360)° | | | | | | | | | | | | | | | | | | | | | | | | Number of Calm winds | Total Number of Observations (T.N) | Mean Scalar wind Speed (Knots) | | | |
|-----------|---------------------------------|---|-----------|-----------------|-----------|-----------------|-----------|-----------------|-----------|-----------------|-----------|-----------------|-----------|-----------------|-----------|-----------------|-----------|-----------------|-----------|-----------------|-----------|-----------------|-----------|-----------------|-----------|-------------------------|---------------------------------------|-----------------------------------|----|----|---|
| | | 345 / 014 | | 015 / 044 | | 045 / 074 | | 075 / 104 | | 105 / 134 | | 135 / 164 | | 165 / 194 | | 195 / 224 | | 225 / 254 | | 255 / 284 | | 285 / 314 | | 315 / 344 | | | | | | | |
| | | N | (ff) m | N | (ff) m | N | (ff) m | N | (ff) m | N | (ff) m | N | (ff) m | N | (ff) m | N | (ff) m | N | (ff) m | N | (ff) m | N | (ff) m | N | (ff) m | | | | | | |
| 0000 U.T. | Surface | 9 | 9 | 5 | 10 | 0 | 8 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 1 | 3 | 6 | 8 | 3 | — | 31 | — | 8 | — | | |
| | 1000 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | | |
| | 850 | 8 | 12 | 3 | 15 | 2 | 15 | 0 | — | 2 | 13 | 0 | — | 0 | — | 1 | 5 | 1 | 12 | 3 | 12 | 4 | 10 | 7 | 12 | 0 | 31 | — | 12 | — | |
| | 700 | 6 | 11 | 1 | 8 | 1 | 4 | 0 | — | 0 | — | 0 | — | 1 | 4 | 4 | 11 | 5 | 17 | 7 | 11 | 7 | 8 | 3 | 12 | 0 | 31 | — | 10 | — | |
| | 600 | 0 | — | 4 | 11 | 2 | 12 | 0 | — | 0 | — | 0 | — | 3 | 7 | 0 | — | 7 | 18 | 10 | 11 | 5 | 8 | 2 | 5 | 0 | 31 | — | 11 | — | |
| | 500 | 1 | 7 | 2 | 10 | 2 | 14 | 1 | 14 | 1 | 7 | 1 | 7 | 0 | — | 2 | 9 | 10 | 18 | 10 | 14 | 2 | 10 | 1 | 7 | 1 | 31 | — | 13 | — | |
| | 400 | 0 | — | 1 | 5 | 1 | 9 | 2 | 10 | 1 | 9 | 2 | 8 | 3 | 7 | 5 | 16 | 8 | 26 | 5 | 14 | 0 | — | 1 | 9 | 0 | 31 | — | 16 | — | |
| | 300 | 0 | — | 0 | — | 0 | — | 2 | 6 | 3 | 7 | 3 | 14 | 5 | 17 | 6 | 18 | 1 | 28 | 2 | 14 | 0 | — | 1 | 5 | 1 | 31 | — | 17 | — | |
| | 200 | 0 | — | 0 | — | 0 | — | 0 | — | 2 | 25 | 4 | 18 | 12 | 16 | 7 | 32 | 1 | 14 | 1 | 15 | 1 | 6 | 0 | — | 0 | 31 | — | 21 | — | |
| | 150 | 0 | — | 0 | — | 1 | 14 | 0 | — | 1 | 6 | 14 | 28 | 8 | 31 | 5 | 26 | 0 | 8 | 0 | — | 0 | — | 0 | — | 0 | 0 | 30 | — | 27 | — |
| | 100 | 0 | — | 0 | — | 0 | — | 0 | — | 7 | 24 | 8 | 28 | 5 | 35 | 2 | 14 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | 0 | 21 | — | 28 | — |
| | 70 | 0 | — | 0 | — | 1 | 9 | 6 | 20 | 1 | 21 | 2 | 21 | 0 | — | 1 | — | 0 | — | 1 | 16 | 0 | — | 0 | — | 0 | 1 | 12 | — | 18 | — |
| 60 | 0 | — | 0 | — | 1 | 37 | 6 | 22 | 3 | 24 | 0 | — | 0 | — | 0 | — | 0 | — | 1 | 25 | 0 | — | 0 | — | 0 | 0 | 11 | — | 24 | — | |
| 50 | 0 | — | 0 | — | 1 | 32 | 5 | 22 | 4 | 33 | 0 | — | 0 | — | 0 | — | 0 | — | 1 | 23 | 0 | — | 0 | — | 0 | 0 | 11 | — | 27 | — | |
| 40 | 0 | — | 0 | — | 2 | 44 | 3 | 27 | 1 | 30 | 0 | — | 0 | — | 0 | — | 0 | — | 1 | 32 | 1 | 22 | 0 | — | 0 | 0 | 8 | — | 32 | — | |
| 30 | 0 | — | 0 | — | 1 | 42 | 4 | 37 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | 0 | 5 | — | 38 | — | |
| 20 | 0 | — | 0 | — | 0 | — | 2 | 38 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | 0 | 2 | — | 38 | — | |
| 10 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | |
| 1200 U.T. | Surface | 8 | 11 | 1 | 11 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 2 | 11 | 1 | 5 | 6 | 10 | 9 | 12 | 4 | 12 | 0 | 31 | — | 11 | — | |
| | 1000 | 12 | 10 | 4 | 15 | 0 | — | 0 | — | 1 | 10 | 0 | — | 0 | — | 1 | 16 | 3 | 8 | 2 | 12 | 3 | 11 | 5 | 13 | 0 | 31 | — | 11 | — | |
| | 850 | 5 | 9 | 2 | 18 | 0 | — | 0 | — | 1 | 8 | 0 | — | 1 | 18 | 3 | 12 | 2 | 13 | 7 | 14 | 10 | 8 | 0 | — | 0 | 31 | — | 12 | — | |
| | 700 | 1 | 9 | 3 | 10 | 0 | — | 0 | — | 2 | 6 | 1 | 7 | 1 | 12 | 6 | 15 | 6 | 15 | 7 | 12 | 4 | 16 | 0 | — | 0 | 31 | — | 13 | — | |
| | 600 | 1 | 6 | 3 | 12 | 0 | — | 0 | — | 0 | — | 1 | 7 | 1 | 17 | 1 | 13 | 12 | 16 | 6 | 20 | 3 | 13 | 3 | 5 | 0 | 31 | — | 15 | — | |
| | 500 | 0 | — | 0 | — | 2 | 10 | 1 | 3 | 3 | 10 | 1 | 7 | 4 | 7 | 7 | 15 | 6 | 27 | 5 | 16 | 1 | 24 | 1 | 5 | 0 | 31 | — | 16 | — | |
| | 400 | 0 | — | 0 | — | 1 | 6 | 1 | 15 | 2 | 16 | 3 | 13 | 5 | 14 | 5 | 19 | 10 | 24 | 2 | 10 | 1 | 4 | 0 | — | 0 | 30 | — | 17 | — | |
| | 300 | 0 | — | 0 | — | 0 | — | 0 | — | 3 | 24 | 9 | 17 | 4 | 12 | 9 | 31 | 2 | 10 | 1 | 10 | 0 | — | 0 | — | 1 | 29 | — | 20 | — | |
| | 200 | 0 | — | 0 | — | 0 | — | 1 | 25 | 3 | 29 | 11 | 23 | 5 | 22 | 5 | 28 | 1 | 17 | 0 | — | 0 | — | 0 | — | 0 | 26 | — | 24 | — | |
| | 150 | 0 | — | 0 | — | 0 | — | 1 | 26 | 7 | 33 | 5 | 39 | 6 | 29 | 0 | — | 1 | 30 | 0 | — | 0 | — | 0 | — | 0 | 20 | — | 32 | — | |
| | 100 | 0 | — | 0 | — | 0 | — | 4 | 30 | 3 | 34 | 4 | 33 | 1 | 30 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | 12 | — | 32 | — | |
| | 70 | 0 | — | 0 | — | 0 | — | 4 | 28 | 5 | 32 | 1 | 25 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | 10 | — | 30 | — | |
| 60 | 0 | — | 0 | — | 0 | — | 8 | 36 | 4 | 27 | 1 | 27 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | 8 | — | 30 | — | | |
| 50 | 0 | — | 0 | — | 0 | — | 4 | 35 | 3 | 18 | 1 | 43 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | 8 | — | 30 | — | | |
| 40 | 0 | — | 0 | — | 0 | — | 5 | 26 | 0 | — | 1 | 27 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | 6 | — | 26 | — | | |
| 30 | 0 | — | 0 | — | 0 | — | 3 | 39 | 1 | 56 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | 4 | — | 23 | — | | |
| 20 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | |
| 10 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | |

N = The number of cases the element has been observed during the month.

TN = The total number of cases the wind has been observed for all directions during the month.

TABLE B 3 (cont'd.)—NUMBER OF OCCURRENCES OF WIND DIRECTION WITHIN SPECIFIED RANGES AND THE MEAN SCALAR WIND SPEED AT THE STANDARD AND SELECTED PRESSURE SURFACES.

ASWAN (A)— JULY 1964

| Time | Pressure Surface (Millibar) | Wint between ranges of direction (000—360)* | | | | | | | | | | | | | | | | Number of calm winds | Total number of observations (T N) | Mean Searlar wind Speed (Knots) | | | | | | | | |
|--------------|--------------------------------|---|-----------|-----|-----------|-----|-----------|-----|-----------|-----|-----------|-----|-----------|---|-----------|----|-----------|-------------------------|---------------------------------------|------------------------------------|-----------|----|----|---|----|----|----|----|
| | | 345 | 015 | 045 | 075 | 105 | 135 | 165 | 195 | 225 | 255 | 285 | 315 | | | | | | | | | | | | | | | |
| | | 014 | 044 | 074 | 104 | 134 | 164 | 194 | 224 | 254 | 284 | 314 | 344 | | | | | | | | | | | | | | | |
| | | N | (ff) m | N | (ff) m | N | (ff) m | N | (ff) m | N | (ff) m | N | (ff) m | N | (ff) m | N | (ff) m | N | (ff) m | N | (ff) m | | | | | | | |
| 0000 U.T. | Surface | 20 | 13 | | 10 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 1 | 10 | 6 | 12 | 2 | 30 | 11 | | |
| | 1000 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | | | |
| | 850 | 3 | 9 | 4 | 11 | 0 | — | 1 | 10 | 0 | — | 0 | — | 0 | — | 3 | 5 | 1 | 17 | 7 | 7 | 11 | 8 | 0 | 30 | 8 | | |
| | 700 | 1 | 3 | 0 | — | 0 | — | 1 | 3 | 0 | — | 3 | 5 | 4 | 8 | 7 | 9 | 5 | 11 | 6 | 5 | 2 | 6 | 1 | 5 | 0 | 30 | 7 |
| | 600 | 0 | — | 2 | 2 | 1 | 5 | 0 | — | 2 | 5 | 11 | 3 | 9 | 2 | 14 | 9 | 10 | 2 | 6 | 2 | 9 | 2 | 5 | 0 | 30 | 9 | |
| | 500 | 0 | — | 2 | 6 | 5 | 6 | 2 | 10 | 1 | 3 | 5 | 9 | 5 | 13 | 2 | 8 | 2 | 6 | 3 | 8 | 1 | 4 | 0 | — | 30 | 8 | |
| | 400 | 0 | — | 2 | 6 | 0 | — | 10 | 10 | 9 | 10 | 6 | 13 | 1 | 12 | 1 | 11 | 0 | — | 0 | — | 0 | — | — | 1 | 1 | 30 | 10 |
| | 300 | 0 | — | 1 | 12 | 0 | — | 11 | 19 | 6 | 14 | 5 | 19 | 3 | 9 | 1 | 8 | 0 | — | 1 | 7 | 0 | — | 0 | — | 1 | 29 | 15 |
| | 200 | 0 | — | 0 | — | 1 | 20 | 9 | 24 | 11 | 33 | 6 | 27 | 0 | — | 1 | 1 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | 28 | 27 |
| | 150 | 0 | — | 0 | — | 0 | — | 7 | 34 | 12 | 33 | 5 | 37 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | 24 | 34 |
| | 100 | 0 | — | 0 | — | 0 | — | 4 | 36 | 8 | 53 | 1 | 40 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | 13 | 47 |
| | 70 | 0 | — | 0 | — | 0 | — | 1 | 22 | 2 | 26 | 1 | 19 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | 4 | 24 |
| | 60 | 0 | — | 0 | — | 0 | — | 2 | 20 | 1 | 55 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | 3 | 32 |
| 50 | 0 | — | 0 | — | 1 | 24 | 1 | 31 | 1 | 22 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | 3 | 26 | |
| 40 | 0 | — | 0 | — | 0 | — | 2 | 39 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | 2 | 39 | |
| 30 | 0 | — | 0 | — | 0 | — | 1 | 40 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | 1 | 40 | |
| 20 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | |
| 10 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | |
| 1200 U.T. | Surface | 15 | 12 | 1 | 8 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 1 | 5 | 2 | 10 | 4 | 14 | 7 | 12 | 1 | 31 | 12 | | |
| | 1000 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | | |
| | 850 | 4 | 9 | 1 | 6 | 0 | — | 0 | — | 0 | — | 1 | 9 | 0 | — | 2 | 10 | 6 | 11 | 8 | 14 | 9 | 10 | 0 | 31 | 11 | | |
| | 700 | 0 | — | 2 | 8 | 0 | — | 0 | — | 1 | 2 | 1 | 14 | 5 | 5 | 6 | 8 | 5 | 13 | 5 | 18 | 4 | 6 | 0 | 0 | 31 | 9 | |
| | 600 | 0 | — | 3 | 8 | 0 | — | 0 | — | 1 | 3 | 3 | 12 | 7 | 12 | 2 | 8 | 8 | 9 | 4 | 6 | 3 | 0 | 0 | 0 | 31 | 9 | |
| | 500 | 1 | 9 | 1 | 3 | 2 | 5 | 2 | 8 | 3 | 7 | 5 | 10 | 8 | 15 | 4 | 16 | 2 | 6 | 1 | 3 | 0 | 1 | 4 | 1 | 31 | 10 | |
| | 400 | 0 | — | 0 | — | 2 | 12 | 14 | 11 | 3 | 8 | 4 | 9 | 2 | 4 | 1 | 17 | 1 | 8 | 1 | 2 | 0 | 1 | 9 | 2 | 31 | 9 | |
| | 300 | 0 | — | 1 | 9 | 2 | 12 | 8 | 24 | 11 | 20 | 5 | 21 | 1 | 9 | 0 | — | 0 | — | 0 | — | 0 | — | 3 | 31 | 18 | | |
| | 200 | 1 | 4 | 1 | 24 | 0 | — | 6 | 34 | 18 | 28 | 3 | 31 | 0 | — | 1 | 7 | 0 | — | 0 | — | 0 | — | 1 | 31 | 27 | | |
| | 150 | 0 | — | 0 | — | 0 | — | 7 | 41 | 15 | 36 | 6 | 35 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 28 | 37 | |
| | 100 | 0 | — | 0 | — | 0 | — | 4 | 42 | 14 | 51 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 18 | 49 | |
| | 70 | 0 | — | 0 | — | 0 | — | 1 | 60 | 3 | 48 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 4 | 51 | |
| | 60 | 0 | — | 0 | — | 0 | — | 0 | — | 3 | 37 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 3 | 37 | |
| 50 | 0 | — | 0 | — | 0 | — | 0 | — | 2 | 46 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 2 | 46 | | |
| 40 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | | |
| 30 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | | |
| 20 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | | |
| 10 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | | |

N — The number of cases the element has been observed during the month.

TN—total number of cases the wind has been observed for all directions during the month.

REVIEW OF AGRO-METEOROLOGICAL STATIONS

EL-KASR — JULY 1964

Normal summer conditions prevailing.

The month started with a minor warm spell giving the highest minimum of air temperatures at 5 and 200 cms (1.4°C above normal) on the 1st.

A cold spell followed with the peak on the 5th., when the absolute minimum air temperature at 5 and 200 cms (5.7°C below normal) and the lowest values of maximum air temperature (1.1°C below normal), the daily mean (2.2°C below normal), night time mean and vapour pressure were recorded as well as the lowest soil temperatures for the layer 5 to 20 cms of depth, whereas the lowest mean of day time temperature was observed on the previous day.

Another minor warm spell started on the 7th. with the highest values of the daily mean and night time mean for wind speed at 2 metres occurring on that day and of vapour pressure deficit on the 10th. together with the lowest values of relative humidity (31% below normal) and the daily mean (14 % below normal).

A cold spell had its peak on the 12th. when the lowest soil temperature of the surface layers down to 2 cms of depth occurred.

The highest values of evaporation from pan class A and Piche in the free air at 1, 60 and 120 cms above the ground and also in the screen (5.3 mms. above normal) were reported on the 13th. whereas the lowest values were recorded on the 21 st. together with the highest daily mean of relative humidity (5 % above normal); while the highest values of soil temperatures for the surface layers down to 20 cms of depth were reported on the following day.

A prolonged minor warm spell prevailed during the last week with the absolute maximum air temperature (1.6°C above normal) on two peaks, 27th. and 30th. and the highest values of the means of air temperature, for the day, night time and day time on the 28th.

The total actual duration of bright sunshine was 389.5 hours or 90 % of the total possible duration.

Compared with the normal values, the means of air temperature, relative humidity and Piche evaporation in the screen were less by 0.2°C , 2% and 0.1 mm. respectively.

TAHRIR — JULY 1964

Mainly mild with the usual stable summer weather.

A cool spell started on the first with the highest mean wind speed at 2 metres and gave the lowest maximum air temperature on the 3rd., 4th. and 5th. when the lowest soil temperature at depth 0.3 cm occurred, while those for the layer 1 to 50 cms of depth were recorded on the 7th. together with the absolute minima of air temperature at 200 and 5 cms.

A heat wave followed with the peak on the 8th giving the absolute maximum air temperature on that day as well as the highest values of soil temperature at depth 0.3 cm and also the water vapour pressure deficit, whereas the lowest values of the relative

humidity (22%), vapour pressure, mean wind speed at 2 metres were reported on the 11th. when a cool spell began, during which the lowest values of Piche evaporation in the screen and in the free air were observed on the 15 th., but that of pan class A on the 17th.

That day was a peak of a minor heat wave with the occurrence of the highest values of soil temperature for the surface layer to 10 cms. Another heat wave started on the 20th. and gave the highest values of minimum air temperature at 200 and 5 cms on the next day.

The highest values of the relative humidity and vapour pressure were associated with a minor cool spell on the 22nd. but the lowest vapour pressure deficit happened on the following day.

A heat wave began on the 28th. and continued to the last day of the month, when the highest values of evaporation from pan class A and Piche in the screen and in the open air at 1, 60 and 120 cms above the ground were recorded.

The month was slightly cooler and drier than the corresponding values of the last year. The daily means of air temperature, relative humidity and Piche evaporation were less by 1.4°C, 4% and 1.4 mms. Also the extreme soil temperatures at the different depths were lower by no more than 2.5°C, while the total radiation and the total actual duration of bright sunshine were more by 939 gm cal/cm² and 4.8 hours respectively.

GIZA — JULY 1964

Mild and humid with maximum temperature and relative humidity below normal for most days of the month.

The first day of the month was a peak of a heat wave which was associated with the occurrence of the absolute maximum air temperature (2°C above normal), the highest values of the daily mean (1°C above normal), day time and night time means, daily range and also those of the evaporation from pan class A and Piche both in the free air at levels 1, 60 & 120 cms above the ground and in the screen (2,3 mms above normal) as well as water vapour pressure deficit together with the lowest values of vapour pressure.

Then the most pronounced cool spell in the month followed and had its peak on the 5th, when the absolute minima of air temperature at 2 metres above ground (1.5°C below normal) and at 5 cms above dry, wet and grass fields and also the absolute minima of soil temperatures in the three fields for the surface layers down to 50 cms depth were recorded, as well as the lowest values of the maximum air temperature (4.7°C below normal) and the daily mean (2.9°C below normal).

The maximum air temperature rose slightly above normal on the 8th. and gave the highest values of soil temperature for the surface layer down to 5 cms depth in the dry field on that day, whereas that at 10 cms occurred on the following day when the highest values of soil temperature for the same layer in the wet field were observed.

Again the maximum air temperature rose to about normal on the 22nd. with the occurrence of the highest value of minimum air temperature and the lowest value of relative humidity (30 % below normal), while the lowest values of the water vapour deficit and the highest values of soil temperatures in the grass field for the surface layer down to 20 cms of depth were observed on the next day.

A cool spell started on the 23rd. and continued to the end of the month with its peak on the 27th. when the highest daily mean of relative humidity (12% above normal) and the lowest values of Piche evaporation in the open air and in the screen (1.7 mms below normal) were recorded, while that of pan class A was reported on the previous day.

Compared with the normal values, the daily mean of air temperature was slightly below (1.2°C), the relative humidity and Piche evaporation were more by 4% and 0.3 mm respectively.

The maxima of soil temperature at the different depths were lower than those of last year by variable amounts not exceeding 1.9°C with respect to the dry field, 2.4°C for wet field and 1.3°C for the grass field. Also the minima of soil temperature were less within 3.9 and 3.2°C for the dry and wet fields respectively while those of the grass field were slightly more.

The absolute minima of air temperature at 5 cms above the ground were also less by 1.7 , 1.6 & 1.8°C above the dry, wet and grass fields respectively.

No material change was observed in the daily mean of wind speed at 2 metres and the total actual duration of bright sunshine. With regard to the mean evaporation of the day from Piche in the open air at 120 cms above ground and pan class A, the values of July 1964 were lower than those of last year by 2.6 and 0.82 mms respectively, and also the total potential evapotranspiration from grass (Libia) by 14.8 mms, while the total potential evaporation from the wet soil was more by 4.3 mms.

KHARGA — JULY 1964

Mainly dry with normal temperature prevailing.

A minor cool spell started on the 2nd. and gave rise to the lowest values of maximum air temperature (3.7°C below normal) on the 4th. and 5th., the daily mean on the latter day, means of day time and night time and also the vapour pressure deficit on the 6th. and vapour pressure on the next day.

That cool spell was followed by a heat wave on the 9th. when the lowest relative humidity 11% (22% below normal) was recorded, while the absolute maximum air temperature (2.4°C above normal) and the highest vapour pressure deficit (49.3 mms) occurred with the peak on the 10th., when the highest means for the day (2.5 above normal) and day time were reported as well as the lowest daily mean of the relative humidity (11 % below normal), whereas the highest values of the soil temperatures of the layer 1 to 20 cms occurred on the following day.

The most pronounced cool spell had its peak on the 14th. with the absolute minima of air temperature at 5 and 20 cms above ground level occurring on the next day together with the highest relative humidity (22% above normal) and the lowest values of evaporation from pan class A and Piche in the open air and in the screen (3.8 mms above normal), while the absolute minimum air temperature in the screen (3.6°C below normal) and the lowest values of soil temperature for the surface layer down to 10 cms of depth, were reported on the 16th.

A minor heat wave started on the 21st. and was associated with the highest values of evaporation from pan class A and Piche in the free air at levels 1, 60 and 120 cms above the ground and in the screen (23.9 mms above normal) and also that of vapour pressure on the following day and those of the minimum air temperature at 5, 20 and 200 cms (4.0°C above normal) and night time mean as well as wind speeds at 50, 100 and 200 cms, occurring on the 23rd.

With respect to normal values, the mean of maximum air temperature was less by 1.0°C , those of the minimum and the daily mean were more by 0.2°C while the mean relative humidity was lower by 6%.

**Table C1.—AIR TEMPERATURE AT 2 METRES ABOVE GROUND
JULY — 1964**

| STATION | Air Temperature (°C) | | | | | Mean Duration in hours of daily air temperature above the following values | | | | | | | | | | |
|-------------------|----------------------|-----------|-----------------|-----------------|---------------|--|------|------|------|------|------|------|------|------|------|------|
| | Mean Max. | Mean Min. | Mean of the day | Night time mean | Day time mean | —5°C | 0°C | 5°C | 10°C | 15°C | 20°C | 25°C | 30°C | 35°C | 40°C | 45°C |
| El Kasr | 28.9 | 19.2 | 24.8 | 22.4 | 26.2 | 24.0 | 24.0 | 24.0 | 24.0 | 24.0 | 22.1 | 11.7 | 0.0 | 0.0 | 0.0 | 0. |
| Tahrir | 33.6 | 19.8 | 26.1 | 22.8 | 28.4 | 24.0 | 24.0 | 24.0 | 24.0 | 24.0 | 22.6 | 12.7 | 5.8 | 0.1 | 0.0 | 0. |
| Giza | 33.3 | 20.2 | 26.3 | 23.7 | 28.3 | 24.0 | 24.0 | 24.0 | 24.0 | 24.0 | 23.3 | 13.5 | 6.0 | 0.06 | 0.0 | 0. |
| Kharga | 38.0 | 23.6 | 31.5 | 28.6 | 33.7 | 24.0 | 24.0 | 24.0 | 24.0 | 24.0 | 24.0 | 23.0 | 14.2 | 6.8 | 0.2 | 0. |

Table C 2.—ABSOLUTE VALUES OF AIR TEMPERATURE AT 2 METRES ABOVE GROUND, ABSOLUTE MINIMUM AIR TEMPERATURE AT 5cms ABOVE GROUND OVER DIFFERENT FIELDS.

JULY — 1964

| STATION | Max. Temp. at 2 metres (°C) | | | | Min. Temp. at 2 metres (°C) | | | | Min. Temp. at 5 cms. above (°C) | | | |
|-------------------|-----------------------------|------|--------|-------|-----------------------------|------|--------|------|---------------------------------|------|-------|------|
| | Highest | | Lowest | | Highest | | Lowest | | Dry soil | | Grass | |
| | Value | Date | Value | Date | Value | Date | Value | Date | Value | Date | Value | Date |
| El Kasr | 29.9 | 27 | 27.2 | 5 | 22.2 | 1 | 15.1 | 5 | 12.5 | 5 | — | — |
| Tahrir | 36.7 | 8 | 30.9 | 3,4,5 | 22.8 | 21 | 17.7 | 7 | 16.0 | 11 | — | — |
| Giza | 37.0 | 1 | 30.5 | 5 | 22.4 | 22 | 18.2 | 5 | 15.2 | 5 | 12.6 | 5 |
| Kharga | 41.8 | 10 | 35.7 | 4,5 | 27.4 | 23 | 19.8 | 16 | 17.2 | 16 | — | — |

Table C 3.—(SOLAR+SKY) RADIATION, DURATION OF BRIGHT SUNSHINE, RELATIVE HUMIDITY, VAPOUR PRESSURE AT 2 METRES ABOVE GROUND, EVAPORATION & RAINFALL

JULY — 1964

| STATION | (Solar+Sky) Radiation gm. cal/cm ² | Duration of Bright Sunshine (hours) | | | Relative Humidity % | | | | | | Vapour pressure (mm) | | | | | Evaporation (mm) | | Rainfall (mm) | | | |
|-------------------|---|-------------------------------------|------------------------|----|---------------------|------|-------------|-----------|--------|------|----------------------|-----------|---------|------|--------|------------------|-------|---------------|----------------------|----------------------|------|
| | | Total Actual monthly | Total Possible monthly | % | Duration in hours | | Mean of day | 1200 U.T. | Lowest | Date | Mean of day | 1200 U.T. | Highest | Date | Lowest | Date | Piche | Pan class A | Total Amount Monthly | Max. Fall in one day | Date |
| | | | | | ✓ | ✓ | | | | | | | | | | | | | | | |
| | | | | | 90 % | 80 % | | | | | | | | | | | | | | | |
| El Kasr | 595.9 | 389.5 | 433.0 | 90 | — | — | 76 | 66 | 42 | 10 | 18.3 | 18.6 | 24.0 | 30 | 10.6 | 5 | 10.7 | 10.11 | 0.0 | — | — |
| Tahrir | 679.9 | 389.7 | 430.9 | 90 | 2.4 | 7.5 | 65 | 37 | 22 | 11 | 15.7 | 13.7 | 20.8 | 21 | 8.2 | 11 | 15.3 | 11.99 | 0.0 | — | — |
| Giza | 677.6 | 369.6 | 429.5 | 86 | 0.9 | 6.3 | 63 | 41 | 29 | 22 | 15.5 | 14.4 | 20.2 | 30 | 10.1 | 1 | 14.1 | 11.30 | 0.0 | — | — |
| Kharga. | 603.2 | 390.1 | 418.8 | 93 | 0 | 0 | 27 | 18 | 11 | 9 | 8.9 | 8.8 | 10.6 | 2.28 | 5.0 | 7 | 40.6 | 20.46 | 0.0 | — | — |

PRINTED IN U.A.R. BY
THE GENERAL ORGANIZATION
FOR GOVT. PRINTING OFFICES. CAIRO
ALY SULTAN ALY
UNDER-SECRETARY OF STATE
Chairman of the Board of Directors

4459-1969-150



UNITED ARAB REPUBLIC

MONTHLY WEATHER REPORT

VOLUME 7

NUMBER 8

AUGUST, 1964

U.D.C. 551. 506.1 (62)

METEOROLOGICAL DEPARTMENT
CAIRO

PUBLICATIONS OF THE METEOROLOGICAL DEPARTMENT OF THE UNITED ARAB REPUBLIC—CAIRO

In fulfilment of its duties, the U.A.R. Meteorological Department issues several reports and publications on weather, climate and agrometeorology. The principal publications are described on this page.

Orders for publications should be addressed to :
"The Director General, Meteorological Department, Kubri-el-Qubbeh — CAIRO".

THE DAILY WEATHER REPORT

This report is issued daily by the Meteorological Department since the year 1901. It includes surface and upper air observations carried out by the relevant networks of the Republic at the principal hours of observations.

As from January 1968 this report was revised to include a condensed representative selection of surface and upper air observations besides the 1200 U.T. surface & 500 mb charts.

THE MONTHLY WEATHER REPORT

First issued in 1909, the Monthly Weather Report served to give a brief summary of the weather conditions that prevailed over Egypt during the month, with a table showing the mean values for few meteorological elements and their deviations from the normal values. From 1954 to 1957 this report was in a rapid state of development and extension resulting into a voluminous report on January 1958 giving surface, upper air, and agro-meteorological data for U.A.R.

As from January 1964, the Monthly Weather Report was pressed to give climatological data for a representative selection of synoptic stations.

THE AGRO-METEOROLOGICAL ABRIDGED MONTHLY REPORT

Gives a review of weather experienced in the agro-meteorological stations of the U.A.R. as well as monthly values of certain elements.

THE ANNUAL REPORT

This report gives annual values and statistics for the various meteorological elements, together with a summary of the weather conditions that prevailed during all months of the year.

CLIMATOLOGICAL NORMALS FOR EGYPT

A voluminous edition was issued in march 1968 which brings normals and mean values up till 1960.

METEOROLOGICAL RESEARCH BULLETIN

First issued in January 1969 on a bi-annual basis. It includes research works carried out by members of staff of "The Meteorological Institute for Research and Training" and the Operational Divisions of Meteorological Department.

TECHNICAL NOTES

As from October 1970, the Meteorological Department started to issue a new series of publications in the form of Technical Notes (non periodical) on subjects related to studies and applications of meteorology in different fields for the benefit of personnel working in these fields.

The first Technical Note I was issued in October 1970 on : Sandstorms & Duststorms in the U.A.R.



UNITED ARAB REPUBLIC

MONTHLY WEATHER REPORT

VOLUME 7

NUMBER 8

AUGUST, 1964

U.D.C. 551. 506.1 (62)

METEOROLOGICAL DEPARTMENT
CAIRO

CONTENTS

| | PAGES |
|---|-------|
| General Summary of Weather Conditions | 1-2 |

SURFACE DATA

| | |
|--|-----|
| Table A1.—Monthly values of the Atmospheric Pressure, Air Temperature, Relative Humidity, Bright Sunshine Duration and Piche Evaporation | 3 |
| „ A2.—Maximum and Minimum Air Temperatures | 4 |
| „ A3.—Sky Cover and Rainfall | 5 |
| „ A4.—Number of Days of Occurrence of Miscellaneous Weather Phenomena | 6 |
| „ A5.—Number in Hours of Occurrences of Concurrent Surface Wind Speed and Direction Recorded Within Specified Ranges | 7,8 |

UPPER AIR DATA

| | |
|--|-------|
| Table B1.—Monthly Means and Monthly Absolute Higher & Lower Values of Altitude, air Temperature & Dew point at Standard and Selected Pressure Surfaces | 9,10 |
| „ B2.—Mean and Extreme values of The Freezing Level and The Tropopause; The Highest Wind Speed in The Upper Air | 11 |
| „ B3.—Number of Occurrences of Wind Direction Within Specified Ranges and The Mean Scalar Wind Speed at the Standard and Selected Pressure Surfaces | 12-14 |

AGRO-METEOROLOGICAL DATA

| | |
|--|-------|
| Reviews of Agro-meteorological stations | 15-17 |
| Table C1.—Air Temperature at 2 Metres Above Ground | 18 |
| „ C2.—Absolute Values, of Air Temperature at 2 Metres Above Ground, Absolute Minimum Air Temperature at 5 Cms Above Ground Over Different Fields | 18 |
| „ C3.—(Solar + Sky) Radiation, Duration of Bright Sunshine, Relative Humidity and Vapour Pressure at 2 Metres Above Ground, Evaporation and Rainfall | 18 |
| „ C4.—Extreme Soil Temperature at Different Depths in Different Fields | 19 |
| „ C5.—Surface wind | 19 |

Note : For explanatory notes on tables please refer to Volume 7, Number 1 (January 1964).

GENERAL SUMMARY OF WEATHER CONDITIONS

AUGUST 1964

Generally mild and humid in the northern parts, hot in the middle parts, and excessively hot in the southern parts. Early morning mist over scattered localities of Delta, Canal and Cairo areas.

GENERAL DESCRIPTION OF WEATHER

The prevailing weather was mild and humid in the northern parts, hot in the middle parts and excessively hot in the extreme southern parts. Early morning mist developed for several days over scattered localities of Delta & Canal areas, and most days of the month over the western parts of Cairo.

PRESSURE DISTRIBUTION

The prevailing pressure distributions over the surface map this month can be summarized in the following pressure systems.

- The complex monsoon low pressure system over Iraq, Arabia & Sudan.
- The monsoon low over the great Sahara of Africa.
- The Anticyclonic ridge extending from the Azores over Europe, western & central Mediterranean.
- The deep northern travelling low pressure system north of latitude 45°N through Urasia.

On the other hand the prevailing upper pressure systems at the 700 & 500 mb levels were confined in the two deep upper low over north Atlantic and north Russia, their upper trough extensions towards west Europe and Black Sea vicinity, and an anticyclonic high pressure belt south of latitude 40°N .

During this month four transitory rather deep depressions traversed Urasia, their

attached southern secondaries approached west vicinity of the Black Sea round the 5th, 9th, 16th & 23rd. Accordingly the complex monsoon over Iraq, Arabia & Sudan showed a gradual northwest elongation and operated over east Mediterranean up to Crete round the 8th, 11th, 18th & 25th respectively.

High pressure occupying central, west Mediterranean and Europe showed minor southward oscillations while weakening by the rapid transits of the deep northern lows through Urasia but rapidly reestablished again at their rears.

It is worth to mention that the barometric pressure over the U.A.R. in particular and east Mediterranean in general experienced four oscillations of small to moderate amplitudes.

Over the U.A.R., the subtropical jet stream was evident in the upper troposphere most of the month round 140 mb level.

The highest wind speeds recorded at Mersa Matruh, Helwan & Aswan were 96, 63 & 78 knots on the 29th, 29th & 13th respectively

SURFACE WIND

The prevailing winds were light/moderate Nly in general. Fresh/strong winds blew during several days over scattered localities of the Republic particularly the Mediterranean (Western part) and Red Sea districts.

No gales were reported during this month.

TEMPERATURE

Both maximum and minimum air temperature showed small variability during this month.

The absolute maximum temperature for the Republic was 45.9°C reported at Kom Ombo on the 16th.

Cairo, August 1971

The absolute minimum temperature the Republic was 16.0 reported at El Kasr Shandaweel on the 31st & 10th respectively

PRECIPITATION

As usual, this month was rainless all over the Republic.

M. F. TAHA

**Under Secretary of State
Director General
Meteorological Department**

SURFACE DATA

Table A 1. — MONTHLY VALUES OF THE ATMOSPHERIC PRESSURE, AIR TEMPERATURE, RELATIVE HUMIDITY, BRIGHT SUNSHINE DURATION & PICHE EVAPORATION.

AUGUST — 1964

| STATION | Atmospheric Pressure (mbs) M.S.L | | Air Temperature °C | | | | | | | | Relative Humidity % | | Bright Sunshine Duration (Hours) | | | Piche Evaporation mms. Mean | |
|-----------------------|-------------------------------------|--------------------------|--------------------|--------------------------|-------------|--------------------------|----------|----------|--------------------------|----------|--------------------------|------|----------------------------------|-----------------|-------------------|--------------------------------|------|
| | | | Maximum | | Minimum | | A+B 2 | Dry Bulb | | Wet Bulb | | | | | | | |
| | Mean | D.F Normal or Average | (A) Mean | D.F Normal or Average | (B) Mean | D.F Normal or Average | | Mean | D.F Normal or Average | Mean | D.F Normal or Average | Mean | D.F Normal or Average | Total Actual | Total Possible | | % |
| Sallum | 1010.4 | + 0.1 | 30.3 | — 0.7 | 22.7 | + 0.5 | 26.5 | 26.2 | — 0.1 | 22.0 | + 0.3 | 67 | + 2 | — | — | — | 7.9 |
| Mersa Matruh (A) | 1010.0 | — 0.1 | 29.5 | — 0.4 | 21.4 | + 0.4 | 25.4 | 25.4 | — 0.2 | 21.4 | — 0.4 | 69 | — 3 | 367.7 | 412.0 | 89.2 | 8.8 |
| Alexandria . . . (A) | 1008.7 | — 0.1 | 30.9 | + 0.5 | 22.5 | — 0.4 | 26.7 | 26.2 | — 0.6 | 21.8 | — 1.2 | 66 | — 7 | 364.1 | 411.1 | 88.6 | 6.2 |
| Port Said (A) | 1007.9 | — 0.4 | 30.4 | — 0.5 | 24.2 | — 0.7 | 27.3 | 26.8 | — 0.6 | 22.9 | — 0.8 | 70 | — 3 | 353.8 | 411.1 | 86.1 | 6.1 |
| El Arish | 1008.0 | + 0.4 | 30.7 | — 0.3 | 21.6 | — 0.2 | 26.2 | 26.5 | — 0.6 | 23.1 | — 0.7 | 74 | — 1 | 367.1 | 408.9 | 89.8 | 6.1 |
| Ghazza | 1007.5 | + 0.1 | 28.8 | — 0.8 | 21.3 | — 1.1 | 25.0 | 25.6 | — 1.0 | 22.5 | — 1.3 | 75 | — 3 | 350.3 | 412.0 | 84.5 | 5.1 |
| Tanta | 1007.7 | — | 33.9 | — | 20.2 | — | 27.0 | 26.2 | — | 21.5 | — | 64 | — | 316.8 | 410.6 | 84.5 | 5.1 |
| Cairo (A) | 1008.1 | — 0.4 | 33.6 | — 1.2 | 21.6 | 0.0 | 27.6 | 27.3 | — 0.6 | 21.3 | — 0.5 | 56 | 0 | — | — | — | 14.5 |
| Fayoum | 1007.6 | — | 36.2 | — | 21.6 | — | 28.9 | 28.4 | — | 21.1 | — | 50 | — | — | — | — | 10.5 |
| Minya (A) | 1007.5 | + 0.1 | 35.1 | — 1.1 | 20.5 | + 0.1 | 27.8 | 27.6 | — 0.8 | 21.4 | — 0.7 | 55 | + 6 | — | — | — | 9.4 |
| Assyout (A) | 1007.2 | + 0.4 | 36.1 | — 0.9 | 22.4 | 0.0 | 29.2 | 29.3 | — 0.4 | 19.6 | — 0.1 | 36 | + 1 | — | — | — | 18.1 |
| Luxor (A) | 1005.5 | + 0.5 | 40.2 | — 0.8 | 23.3 | — 0.2 | 31.8 | 32.1 | — 0.8 | 19.8 | — 0.2 | 27 | + 1 | — | — | — | 14.0 |
| Aswan (A) | 1005.8 | + 0.8 | 41.0 | — 1.0 | 25.1 | — 1.3 | 33.0 | 33.2 | — 0.5 | 18.3 | 0.0 | 17 | + 1 | — | — | — | 21.7 |
| Siwa | 1009.6 | — 0.2 | 27.1 | — 0.7 | 20.3 | — 0.4 | 28.7 | 29.2 | — 0.7 | 19.8 | 0.0 | 38 | + 2 | — | — | — | 14.9 |
| Bahariya | 1008.3 | 0.0 | 36.7 | — 0.6 | 21.3 | + 0.3 | 29.0 | 29.2 | — 0.4 | 19.7 | — 0.1 | 37 | + 1 | — | — | — | 10.1 |
| Farafra | 1009.1 | — | 37.2 | — | 20.7 | — | 29.0 | 29.1 | — | 18.3 | — | 30 | — | — | — | — | 19.6 |
| Dakhla | 1005.5 | — 0.3 | 38.5 | 0.0 | 21.0 | — 1.9 | 29.8 | 30.3 | — 0.4 | 18.0 | — 0.2 | 24 | + 2 | — | — | — | 20.0 |
| Kharga | 1007.0 | — | 39.5 | — | 22.6 | — | 31.0 | 31.8 | — | 18.3 | — | 21 | — | 380.6 | 400.0 | 95.1 | 24.6 |
| Tor | 1005.2 | + 0.8 | 34.5 | — 0.4 | 25.0 | 0.0 | 29.8 | 29.1 | — 0.2 | 23.1 | — 0.5 | 58 | — 2 | — | — | — | 9.6 |
| Hurghada | 1005.3 | + 1.0 | 34.0 | + 1.0 | 24.6 | — 0.4 | 29.3 | 29.6 | — 0.4 | 21.5 | — 0.9 | 46 | — 4 | — | — | — | 19.9 |
| Quesir | 1005.9 | + 1.3 | 32.3 | — 1.5 | 26.1 | — 0.8 | 29.2 | 29.6 | — 0.1 | 20.2 | — 0.4 | 49 | + 3 | — | — | — | 16.8 |

Table A 2.—MAXIMUM AND MINIMUM AIR TEMPERATURES

AUGUST — 1964

| Station | Maximum Temperature °C | | | | | | | | | Grass Min. Temp. | | Minimum Temperature °C | | | | | | | | |
|--------------------------|------------------------|--------|--------|---------|----------------------------|-----|-----|-----|-----|------------------|------------------|------------------------|-----------|--------|--------|-----------------------------|----|----|-----|--|
| | Highest | Date | Lowest | Date | No. of Days with Max-Temp. | | | | | Mean | Dev. From Normal | Highest | Date | Lowest | Date | No. of Days with Min. Temp. | | | | |
| | | | | | >25 | >30 | >35 | >40 | >45 | | | | | | | <10 | <5 | <0 | <-5 | |
| Saltun | 39.4 | 11 | 27.2 | 30 | 31 | 15 | 1 | 0 | 0 | 21.7 | — | 25.4 | 26 | 20.2 | 31 | 0 | 0 | 0 | 0 | |
| Marwa Matruh . . . (A) | 38.6 | 11 | 27.4 | 31 | 31 | 2 | 1 | 0 | 0 | — | — | 24.3 | 25 | 17.8 | 31 | 0 | 0 | 0 | 0 | |
| Alexandria (A) | 34.4 | 11 | 29.0 | 31 | 31 | 25 | 0 | 0 | 0 | — | — | 24.6 | 23 | 18.8 | 16 | 0 | 0 | 0 | 0 | |
| Port Said (A) | 32.6 | 25 | 28.5 | 15 | 31 | 18 | 0 | 0 | 0 | 23.1 | — | 26.2 | 27 | 22.8 | 3 | 0 | 0 | 0 | 0 | |
| El Arish | 31.9 | 27 | 29.1 | 7 | 31 | 25 | 0 | 0 | 0 | 20.4 | — | 22.8 | 4, 18, 27 | 19.5 | 15 | 0 | 0 | 0 | 0 | |
| Ghazze | 29.7 | 26, 27 | 28.0 | 7, 9, 5 | 31 | 0 | 0 | 0 | 0 | 20.3 | — | 22.5 | 24 | 19.5 | 15 | 0 | 0 | 0 | 0 | |
| Tanta | 36.0 | 25, 26 | 31.3 | 14 | 31 | 31 | 4 | 0 | 0 | — | — | 22.9 | 23 | 16.7 | 31 | 0 | 0 | 0 | 0 | |
| Cairo (A) | 36.8 | 17 | 30.7 | 14 | 31 | 31 | 7 | 0 | 0 | — | — | 24.2 | 13 | 19.5 | 17 | 0 | 0 | 0 | 0 | |
| Fayoum | 40.8 | 12 | 32.6 | 30 | 31 | 31 | 25 | 1 | 0 | 19.2 | — | 23.8 | 21 | 19.4 | 31 | 0 | 0 | 0 | 0 | |
| Minya (A) | 40.3 | 12 | 31.3 | 31 | 31 | 31 | 17 | 1 | 0 | 16.6 | — | 23.4 | 27 | 18.0 | 8 | 0 | 0 | 0 | 0 | |
| Assiout (A) | 39.6 | 12 | 32.3 | 30 | 31 | 31 | 24 | 0 | 0 | 20.2 | — | 24.0 | 5 | 19.5 | 31 | 0 | 0 | 0 | 0 | |
| Luxor (A) | 44.0 | 16 | 37.2 | 31 | 31 | 31 | 31 | 15 | 0 | — | — | 26.0 | 17 | 20.0 | 10, 12 | 0 | 0 | 0 | 0 | |
| Aswan (A) | 43.0 | 15 | 37.8 | 31 | 31 | 31 | 31 | 25 | 0 | — | — | 28.0 | 16 | 22.2 | 31 | 0 | 0 | 0 | 0 | |
| Siva | 40.5 | 4, 11 | 32.3 | 30 | 31 | 31 | 28 | 2 | 0 | 19.5 | — | 24.2 | 5, 12 | 17.9 | 29, 31 | 0 | 0 | 0 | 0 | |
| Bahariya | 40.5 | 12 | 32.6 | 30 | 31 | 31 | 26 | 1 | 0 | 20.2 | — | 23.9 | 5 | 18.6 | 31 | 0 | 0 | 0 | 0 | |
| Farafra | 43.0 | 12 | 32.6 | 29 | 31 | 31 | 24 | 3 | 0 | 20.0 | — | 23.0 | 5 | 17.9 | 31 | 0 | 0 | 0 | 0 | |
| Dakke | 43.2 | 5 | 34.0 | 30 | 31 | 31 | 28 | 6 | 0 | 15.3 | — | 25.0 | 14 | 17.2 | 26 | 0 | 0 | 0 | 0 | |
| Kharga | 42.0 | 5, 20 | 35.4 | 31 | 31 | 31 | 31 | 13 | 0 | 20.9 | — | 27.8 | 6 | 18.2 | 9 | 0 | 0 | 0 | 0 | |
| Tor | 40.4 | 20 | 30.0 | 14 | 31 | 30 | 10 | 1 | 0 | — | — | 27.0 | 23 | 20.7 | 10 | 0 | 0 | 0 | 0 | |
| Hurghada | 36.8 | 16 | 31.6 | 14 | 31 | 31 | 6 | 0 | 0 | 23.0 | — | 26.8 | 20 | 21.8 | 10 | 0 | 0 | 0 | 0 | |
| Quesir | 34.2 | 16, 17 | 30.6 | 14 | 31 | 31 | 0 | 0 | 0 | 22.6 | — | 28.3 | 21 | 23.5 | 8, 9 | 0 | 0 | 0 | 0 | |

Table A 3.—SKY COVER AND RAINFALL

AUGUST — 1964

| Station | Mean Sky Cover Oct | | | | | Rainfall mm | | | | | | | | | | |
|-----------------------|--------------------|------|------|------|-------|-----------------|---------------------|-------------------------|------|------------------------------------|-------|-------|-------|------|------|------|
| | 00 | 06 | 12 | 18 | Daily | Total Amount | Dev. From Normal | Max. Fall in one day | | Number of Days With Amount of Rain | | | | | | |
| | U.T. | U.T. | U.T. | U.T. | Mean | | | Amount | Date | < 0.1 | ≥ 0.1 | ≥ 1.0 | ≥ 5.0 | ≥ 10 | ≥ 25 | ≥ 50 |
| | | | | | | | | | | | | | | | | |
| Sallum | 0.6 | 1.1 | 0.7 | 1.0 | 0.8 | 0.0 | 0.0 | 0.0 | — | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Mersa Matruh (A) | 0.5 | 2.2 | 1.2 | 1.3 | 1.2 | 0.0 | 0.0 | 0.0 | — | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Alexandria (A) | 2.6 | 3.2 | 1.9 | 2.1 | 2.2 | 6.0 | — 0.5 | 0.0 | — | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Port Said (A) | 0.7 | 2.2 | 0.2 | 0.4 | 0.8 | 0.0 | — tr. | 0.0 | — | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| El Ariah | 3.1 | 2.5 | 0.6 | 1.0 | 1.4 | 0.0 | — 0.3 | 0.0 | — | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ghazza | 4.3 | 2.8 | 0.5 | 1.7 | 2.3 | 0.0 | — tr. | 0.0 | — | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Tanta | — | 1.8 | 0.8 | 0.0 | — | 0.0 | 0.0 | 0.0 | — | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Cairo (A) | 1.4 | 3.5 | 0.4 | 0.1 | 1.3 | 0.0 | — tr. | 0.0 | — | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Woyum | — | 0.6 | 0.1 | 0.2 | — | 0.0 | 0.0 | 0.0 | — | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Minya (A) | 0.0 | 1.0 | 0.1 | 0.3 | 0.3 | 0.0 | — tr. | 0.0 | — | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Assyout (A) | 0.0 | 0.6 | 0.1 | 0.0 | 0.1 | 0.0 | 0.0 | 0.0 | — | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Luxor (A) | 0.1 | 0.4 | 0.5 | 0.4 | 0.5 | 0.0 | 0.0 | 0.0 | — | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Aswan (A) | 0.0 | 0.9 | 0.9 | 0.7 | 0.6 | 0.0 | 0.0 | 0.0 | — | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Siwa | 0.0 | 0.4 | 0.6 | 0.2 | 0.3 | 0.0 | 0.0 | 0.0 | — | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Bahariya | 0.0 | 1.3 | 0.4 | 0.2 | 0.4 | 0.0 | 0.0 | 0.0 | — | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Farafra | 0.0 | 0.2 | 0.2 | 0.0 | 0.5 | 0.0 | 0.0 | 0.0 | — | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Dakhla | 0.0 | 0.4 | 0.2 | 0.0 | 0.1 | 0.0 | 0.0 | 0.0 | — | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Kharga | 0.1 | 0.4 | 0.3 | 0.5 | 0.4 | 0.0 | 0.0 | 0.0 | — | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Tor | 0.0 | 0.0 | 0.3 | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 | — | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Hurghada | 0.1 | 0.2 | 0.0 | 0.3 | 0.1 | 0.0 | 0.0 | 0.0 | — | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Quesir | 0.0 | 0.2 | 0.3 | 0.3 | 0.2 | 0.0 | 0.0 | 0.0 | — | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

Table A 4.—DAYS OF OCCURRENCE OF MISCELLANEOUS WEATHER PHENOMENA

AUGUST — 1964

| Station | Precipitation | | | | Frost | Thunderstorm | Mist Vis \geq 1000 metres | Fog Vis $<$ 1000 Metres | Haze Vis \geq 1000 Metres | Thick Haze Vis $<$ 1000 Metres | Dust or Sandrising Vis \geq 1000 Metres | Dust or Sandstorm Vis $<$ 1000 Metres | Gale | Clear Sky | Cloudy Sky |
|------------------------|---------------|------|--------------|------|-------|--------------|-----------------------------|-------------------------|-----------------------------|--------------------------------|---|---------------------------------------|------|-----------|------------|
| | Rain | Snow | Ice. Pellets | Hail | | | | | | | | | | | |
| Sallum. | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 26 | 0 |
| Mersa Matruh. . . (A) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 23 | 0 |
| Alexandria. . . . (A) | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 2 | 0 | 0 | 0 | 0 | 0 | 14 | 0 |
| Port Said. (A) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 28 | 0 |
| El Arish. | 0 | 0 | 0 | 0 | 0 | 0 | 10 | 0 | 0 | 0 | 0 | 0 | 0 | 16 | 0 |
| Ghazza. | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 14 | 0 |
| Tanta. | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | — | — |
| Cairo. (A) | 0 | 0 | 0 | 0 | 0 | 0 | 17 | 4 | 7 | 0 | 0 | 0 | 0 | 25 | 0 |
| Fayoum. | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | — | — |
| Minya. (A) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 31 | 0 |
| Assyout. (A) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 8 | 0 | 0 | 0 | 0 | 31 | 0 |
| Luxor. (A) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 30 | 0 |
| Aswan. (A) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5 | 0 | 0 | 30 | 0 |
| Siwa. | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 0 | 31 | 0 |
| Bahariya. | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 31 | 0 |
| Farafra. | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 31 | 0 |
| Dakhla. | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 31 | 0 |
| Kharga. | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 29 | 0 |
| Tor. | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 1 | 0 | 0 | 31 | 0 |
| Hurghada. | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 31 | 0 |
| Quseir. | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 30 | 0 |

Table A 5.—NUMBER IN HOURS OF OCCURRENCES OF CONCURRENT SURFACE WIND SPEED AND DIRECTION RECORDED WITHIN SPECIFIED RANGES

AUGUST — 1964

| Station | Calm (hours) | Variable (hours) | Unrecorded (hours) | Wind speed in knots | Number in hours of occurrences of wind blowing from the ranges of directions indicated | | | | | | | | | | | | | All directions |
|-------------------|--------------|------------------|--------------------|--|---|----------------------------|-------------------------|-------------------------|-------------------------|---------------------------|-------------------------|-------------------------|-------------------------|---------------------------|-----------------------------|-----------------------------|-----------------------------|----------------|
| | | | | | 345 | 015 | 045 | 075 | 105 | 135 | 165 | 195 | 225 | 255 | 285 | 315 | | |
| | | | | | /014 | /044 | /074 | /104 | /134 | /164 | /194 | /224 | /254 | /284 | /314 | /344 | | |
| sa Matruh. (A) | 10 | 0 | 78 | 1-10 11-27 28-47 ≥ 48 All speeds | 65 252 0 0 317 | 12 4 0 0 16 | 0 0 0 0 0 | 0 0 0 0 0 | 0 0 0 0 0 | 0 0 0 0 0 | 0 0 0 0 0 | 0 1 0 0 1 | 0 3 0 0 3 | 15 8 0 0 23 | 48 14 0 0 62 | 74 160 0 0 234 | 214 242 0 0 656 | |
| randria . . (A) | 7 | 0 | 0 | 1-10 11-27 28-47 ≥ 48 All speeds | 83 60 0 0 143 | 12 0 0 0 12 | 2 0 0 0 2 | 2 0 0 0 2 | 2 0 0 0 2 | 4 0 0 0 4 | 14 0 0 0 14 | 5 0 0 0 5 | 26 0 0 0 26 | 58 52 0 0 110 | 219 196 0 0 415 | 429 308 0 0 737 | | |
| t Said. . . (A) | 2 | 4 | 0 | 1-10 11-27 28-47 ≥ 48 All Speeds | 161 47 0 0 208 | 38 0 0 0 38 | 3 0 0 0 3 | 0 0 0 0 0 | 7 0 0 0 7 | 2 0 0 0 2 | 4 0 0 0 4 | 6 0 0 0 6 | 44 3 0 0 47 | 115 2 0 0 117 | 49 3 0 0 52 | 169 85 0 0 254 | 598 140 0 0 738 | |
| azza. . . . (A) | 0 | 35 | 1 | 1-10 11-27 28-47 ≥ 48 All speeds | 46 16 0 0 62 | 7 1 0 0 8 | 8 0 0 0 8 | 10 0 0 0 10 | 24 0 0 0 24 | 180 2 0 0 182 | 36 0 0 0 36 | 15 1 0 0 16 | 25 2 0 0 27 | 57 10 0 0 67 | 90 32 0 0 122 | 108 38 0 0 146 | 606 102 0 0 708 | |
| nta | 37 | 11 | 0 | 1-10 11-27 28-47 ≥ 48 All speeds | 95 0 0 0 95 | 32 0 0 0 32 | 6 0 0 0 6 | 3 0 0 0 3 | 4 0 0 0 4 | 2 0 0 0 2 | 2 0 0 0 2 | 30 0 0 0 30 | 36 0 0 0 36 | 104 0 0 0 104 | 154 0 0 0 154 | 178 0 0 0 178 | 696 0 0 0 696 | |
| iro (A) | 20 | 1 | 6 | 1-10 11-27 28-47 ≥ 48 All speeds | 127 59 0 0 186 | 120 41 0 0 161 | 50 8 0 0 58 | 12 0 0 0 12 | 7 0 0 0 7 | 5 2 0 0 7 | 1 0 0 0 1 | 3 0 0 0 3 | 3 0 0 0 3 | 6 0 0 0 6 | 71 5 0 0 76 | 168 29 0 0 197 | 573 144 0 0 717 | |
| youm | 7 | 0 | 7 | 1-10 11-27 28-47 ≥ 48 All speeds | 453 1 0 0 454 | 47 0 0 0 47 | 4 0 0 0 4 | 3 0 0 0 3 | 0 0 0 0 0 | 1 0 0 0 1 | 7 0 0 0 7 | 6 0 0 0 6 | 1 0 0 0 1 | 17 0 0 0 17 | 40 0 0 0 40 | 150 0 0 0 150 | 729 1 0 0 730 | |
| inya (A) | 32 | 8 | 4 | 1-10 11-27 28-47 ≥ 48 All speeds | 144 0 0 0 144 | 8 0 0 0 8 | 0 0 0 0 0 | 0 0 0 0 0 | 4 0 0 0 4 | 8 0 0 0 8 | 2 0 0 0 2 | 0 0 0 0 0 | 6 0 0 0 6 | 10 0 0 0 10 | 59 0 0 0 59 | 413 46 0 0 459 | 654 46 0 0 700 | |

Table A 5. (contd.)—NUMBER IN HOURS OF OCCURRENCES OF CONCURRENT SURFACE WIND SPEED AND DIRECTION RECORDED WITHIN SPECIFIED RANGES

AUGUST — 1964

| Station | Calm (hours) | Variable (hours) | Unrecorded (hours) | Wind speed in knots | Number in hours of occurrences of wind blowing from the ranges of directions indication | | | | | | | | | | | |
|-----------------------|--------------|------------------|--------------------|------------------------|--|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| | | | | | 345 | 015 | 045 | 075 | 105 | 135 | 165 | 195 | 225 | 255 | 285 | 315 |
| | | | | | 014 | 044 | 074 | 104 | 134 | 164 | 194 | 224 | 254 | 284 | 314 | 344 |
| Assyout (A) | 16 | 0 | 0 | 1—10 | 4 | 11 | 2 | 0 | 7 | 2 | 2 | 1 | 15 | 204 | 233 | 198 |
| | | | | 11—27 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 18 | 31 |
| | | | | 28—47 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | | | | ≥ 48 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | | | | All speeds | 4 | 11 | 2 | 0 | 7 | 2 | 2 | 1 | 15 | 204 | 251 | 229 |
| Luxor (A) | 18 | 0 | 2 | 1—10 | 16 | 18 | 17 | 7 | 8 | 33 | 28 | 63 | 69 | 66 | 120 | 176 |
| | | | | 11—27 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 9 | 25 |
| | | | | 28—47 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | | | | ≥ 48 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | | | | All speeds | 16 | 18 | 17 | 7 | 8 | 33 | 28 | 63 | 69 | 67 | 129 | 201 |
| Aswan (A) | 9 | 0 | 168 | 1—10 | 99 | 138 | 94 | 21 | 1 | 1 | 4 | 5 | 13 | 13 | 35 | 72 |
| | | | | 11—27 | 8 | 17 | 16 | 1 | 0 | 0 | 0 | 0 | 0 | 3 | 12 | 14 |
| | | | | 28—47 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | | | | ≥ 48 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | | | | All speeds | 107 | 155 | 110 | 22 | 1 | 1 | 4 | 5 | 13 | 16 | 47 | 86 |
| Siwa | 77 | 19 | 0 | 1—10 | 90 | 124 | 85 | 37 | 12 | 6 | 1 | 1 | 3 | 24 | 73 | 86 |
| | | | | 11—27 | 18 | 49 | 6 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 4 | 16 |
| | | | | 28—47 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | | | | ≥ 48 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | | | | All speeds | 108 | 173 | 91 | 37 | 12 | 6 | 1 | 2 | 3 | 24 | 77 | 104 |
| Dakhla | 7 | 9 | 0 | 1—10 | 115 | 77 | 13 | 4 | 13 | 6 | 12 | 28 | 38 | 73 | 117 | 232 |
| | | | | 11—27 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | | | | 28—47 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | | | | ≥ 48 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | | | | All speeds | 115 | 77 | 13 | 4 | 13 | 6 | 12 | 28 | 38 | 73 | 117 | 232 |
| Hurghada. (A) | 10 | 6 | 1 | 1—10 | 13 | 12 | 9 | 2 | 1 | 7 | 3 | 3 | 1 | 15 | 77 | 36 |
| | | | | 11—27 | 161 | 17 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 19 | 141 | 210 |
| | | | | 28—47 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | | | | ≥ 48 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | | | | All speeds | 174 | 29 | 9 | 2 | 1 | 7 | 3 | 3 | 1 | 34 | 219 | 246 |
| Quesir | 32 | 13 | 33 | 1—10 | 124 | 58 | 7 | 8 | 3 | 14 | 7 | 10 | 20 | 53 | 95 | 130 |
| | | | | 11—27 | 96 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 2 | 45 |
| | | | | 28—47 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | | | | ≥ 48 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | | | | All speeds | 220 | 61 | 7 | 8 | 3 | 14 | 7 | 10 | 20 | 54 | 97 | 165 |

UPPER AIR CLIMATOLOGICAL DATA

Table B 1. (contd.)—MONTHLY MEANS AND MONTHLY ABSOLUTE HIGHER & LOWER VALUES OF ALTITUDE, AIR TEMPERATURE & DEW POINT AT STANDARD AND ELECTED PRESSURE SURFACES

AUGUST — 1964

| Station | Pressure Surface (Millibar) | Altitude of Pressure Surface (gpm) | | | | Temperature (°C) | | | | Dew Point (°C) | |
|--------------------------|-----------------------------|------------------------------------|------------------------|------------------------|------------------------|------------------|-------|---------|--------|----------------|-------|
| | | N | Mean | Highest | Lowest | N | Mean | Highest | Lowest | N | Mean |
| Morro Matruh (A) 0000 UT | Surface | 30 | 1010 [*] m.b. | 1013 [*] m.b. | 1006 [*] m.b. | 30 | 23.0 | 25.0 | 19.3 | 30 | 19.8 |
| | 1000 | 30 | 116 | 140 | 81 | 30 | 22.8 | 26.0 | 19.9 | 30 | 18.8 |
| | 850 | 30 | 1519 | 1544 | 1497 | 30 | 18.2 | 24.4 | 11.8 | 26 | 2.7 |
| | 700 | 30 | 3162 | 3202 | 3113 | 30 | 10.2 | 13.8 | 4.4 | 8 | -6.5 |
| | 600 | 30 | 4428 | 4480 | 4365 | 30 | 3.8 | 6.9 | -1.4 | — | — |
| | 500 | 30 | 5882 | 5947 | 5801 | 30 | -5.5 | -1.5 | -10.3 | — | — |
| | 400 | 30 | 7590 | 7657 | 7478 | 30 | -17.3 | -12.0 | -22.5 | — | — |
| | 300 | 28 | 9701 | 9818 | 9546 | 28 | -30.0 | -27.2 | -33.2 | — | — |
| | 250 | — | — | — | — | — | — | — | — | — | — |
| | 200 | 24 | 12472 | 12599 | 12298 | 24 | -50.0 | -45.0 | -52.0 | — | — |
| | 150 | 20 | 14296 | 14436 | 14118 | 20 | -63.0 | -60.0 | -64.7 | — | — |
| | 100 | 15 | 16726 | 16866 | 16556 | 15 | -73.7 | -68.6 | -77.6 | — | — |
| | 70 | 10 | 18822 | 18920 | 18700 | 10 | -67.9 | -95.0 | -71.6 | — | — |
| | 60 | — | — | — | — | — | — | — | — | — | — |
| | 50 | 8 | 20852 | 20948 | 20568 | 8 | -58.5 | -55.0 | -60.4 | — | — |
| | 40 | — | — | — | — | — | — | — | — | — | — |
| | 30 | 5 | 24144 | 24238 | 24058 | 5 | -52.5 | -51.3 | -54.4 | — | — |
| | 20 | 2 | 26766 | 26841 | 16690 | 2 | -49.1 | -47.7 | -50.5 | — | — |
| | 10 | — | — | — | — | — | — | — | — | — | — |
| Helwan 0000 UT | Surface | 31 | 992 [*] m.b. | 995 [*] m.b. | 988 [*] m.b. | 31 | 23.1 | 26.3 | 20.2 | 31 | 19.0 |
| | 1000 | 31 | 74 | 100 | 44 | — | — | — | — | — | — |
| | 850 | 31 | 1478 | 1508 | 1452 | 31 | 50.1 | 24.7 | 13.2 | 24 | 2.3 |
| | 700 | 31 | 3127 | 3168 | 3095 | 31 | 12.2 | 16.1 | 7.2 | 3 | -10.0 |
| | 600 | 31 | 4401 | 4447 | 4350 | 31 | 5.7 | 8.4 | 2.2 | — | — |
| | 500 | 31 | 5868 | 5925 | 5802 | 31 | -3.0 | 0.4 | -7.6 | — | — |
| | 400 | 31 | 7600 | 7681 | 7508 | 31 | -13.9 | -10.5 | -18.6 | — | — |
| | 300 | 31 | 9712 | 9812 | 9556 | 31 | -28.8 | -20.3 | -32.7 | — | — |
| | 250 | — | — | — | — | — | — | — | — | — | — |
| | 200 | 31 | 12497 | 12699 | 12331 | 31 | -49.8 | -47.0 | -52.7 | — | — |
| | 150 | 28 | 14328 | 14440 | 14130 | 28 | -63.5 | -60.7 | -66.2 | — | — |
| | 100 | 22 | 16727 | 16828 | 16513 | 22 | -74.2 | -68.4 | -79.2 | — | — |
| | 70 | 19 | 18814 | 18940 | 18620 | 19 | -69.1 | -64.7 | -79.6 | — | — |
| | 60 | 17 | 19746 | 19820 | 19567 | 17 | -64.2 | -61.6 | -61.6 | — | — |
| | 50 | 17 | 20875 | 20953 | 20704 | 17 | -59.8 | -52.8 | -67.0 | — | — |
| | 40 | 14 | 22299 | 22363 | 22198 | 14 | -55.7 | -52.4 | -54.7 | — | — |
| | 30 | 14 | 24144 | 24197 | 24050 | 14 | -52.4 | -51.0 | -53.8 | — | — |
| | 20 | 9 | 26785 | 26869 | 26698 | 9 | -48.6 | -45.8 | -56.6 | — | — |
| | 10 | 4 | 31417 | 31512 | 31364 | 4 | -40.8 | -38.0 | -43.6 | — | — |
| Aswan (A) 0000 UT | Surface | 31 | 984 [*] m.b. | 987 [*] m.b. | 978 [*] m.b. | 31 | 28.0 | 38.8 | 22.0 | 31 | 7.2 |
| | 1000 | — | — | — | — | — | — | — | — | — | — |
| | 850 | 31 | 1434 | 1519 | 1422 | 31 | 23.3 | 25.8 | 21.0 | 30 | 4.9 |
| | 700 | 31 | 3141 | 3177 | 3103 | 31 | 11.8 | 14.8 | 7.8 | 22 | -1.5 |
| | 600 | 31 | 4410 | 4463 | 4338 | 31 | 4.0 | 7.6 | 1.1 | 20 | -6.8 |
| | 500 | 31 | 5867 | 5926 | 5821 | 31 | -4.5 | -1.0 | -8.4 | 12 | -15.8 |
| | 400 | 31 | 7597 | 7660 | 7537 | 31 | -14.2 | -11.6 | -18.5 | 2 | -24.9 |
| | 300 | 31 | 9717 | 9828 | 9637 | 31 | -27.1 | -27.2 | -32.3 | — | — |
| | 250 | — | — | — | — | — | — | — | — | — | — |
| | 200 | 31 | 12486 | 12644 | 12396 | 31 | -50.9 | -47.0 | -53.5 | — | — |
| | 150 | 31 | 14377 | 15429 | 14200 | 31 | -64.8 | -62.2 | -67.4 | — | — |
| | 100 | 29 | 16688 | 16892 | 16570 | 29 | -78.2 | -72.4 | -82.0 | — | — |
| | 70 | 21 | 18743 | 18850 | 18559 | 21 | -69.4 | -65.0 | -78.7 | — | — |
| | 60 | — | — | — | — | — | — | — | — | — | — |
| | 50 | 14 | 20813 | 20882 | 20746 | 14 | -62.2 | -56.8 | -72.3 | — | — |
| | 40 | — | — | — | — | — | — | — | — | — | — |
| | 30 | 9 | 24035 | 24117 | 23957 | 9 | -54.3 | -51.0 | -55.8 | — | — |
| | 20 | 9 | 26662 | 26765 | 26578 | 9 | -48.3 | -41.3 | -53.9 | — | — |
| | 10 | 5 | 31250 | 31360 | 31160 | 5 | -47.0 | -45.5 | -49.3 | — | — |

N — The number of cases the element has been observed during the month.

* The atmospheric pressure corrected to the elevation of the radio station.

UPPER AIR CLIMATOLOGICAL DATA

**Table B 1.—MONTHLY MEANS AND MONTHLY ABSOLUTE HIGHER & LOWER
VALEUS OF ALTITUDE, AIR TEMPERATURE & DEW POINT AT
STANDARD AND SELECTED PRESSURE SURFACES**

AUGUST — 1964

| Station | Pressure Surface (Millibar) | Altitude of Pressure Surface (gpm) | | | | Temperature (°C) | | | | Dew point (°C) | |
|--------------------------|-----------------------------|------------------------------------|----------|----------|----------|------------------|-------|---------|--------|----------------|-------|
| | | N | Mean | Highest | Lowest | N | Mean | Highest | Lowest | N | Mean |
| Mersa Matruh (A) 1200 UT | Surface | 30 | 1010m.b. | 1014m.b. | 1006m.b. | 30 | 26.5 | 32.0 | 23.0 | 30 | 20.7 |
| | 1000 | 30 | 121 | 149 | 90 | 30 | 25.2 | 31.7 | 21.7 | 30 | 19.4 |
| | 850 | 30 | 1531 | 1554 | 1498 | 30 | 18.6 | 24.1 | 10.6 | 30 | 1.4 |
| | 700 | 30 | 3167 | 3210 | 3121 | 30 | 10.4 | 14.6 | 4.6 | 6 | -7.2 |
| | 600 | 30 | 4435 | 4478 | 4364 | 30 | 3.4 | 6.9 | -0.9 | 1 | -15.1 |
| | 500 | 30 | 5890 | 5932 | 5798 | 30 | -5.6 | -0.7 | -10.0 | — | — |
| | 400 | 30 | 7603 | 7673 | 7482 | 30 | -16.6 | -12.7 | -21.4 | — | — |
| | 300 | 28 | 9673 | 9790 | 9557 | 28 | -30.1 | -26.5 | -33.0 | — | — |
| | 250 | — | — | — | — | — | — | — | — | — | — |
| | 200 | 25 | 12483 | 12597 | 12297 | 25 | -48.8 | -41.0 | -52.6 | — | — |
| | 150 | 23 | 14299 | 14440 | 14112 | 23 | -63.2 | -60.7 | -65.3 | — | — |
| | 100 | 20 | 16714 | 16863 | 16554 | 20 | -71.1 | -68.2 | -80.5 | — | — |
| | 70 | 12 | 18828 | 18937 | 18700 | 12 | -66.1 | -62.6 | -70.7 | — | — |
| | 60 | — | — | — | — | — | — | — | — | — | — |
| | 50 | 9 | 20949 | 21026 | 20824 | 9 | -56.3 | -51.6 | -59.5 | — | — |
| | 40 | — | — | — | — | — | — | — | — | — | — |
| | 30 | 8 | 24243 | 24333 | 24112 | 8 | -49.3 | -44.9 | -51.4 | — | — |
| | 20 | 5 | 26865 | 26997 | 26773 | 5 | -47.6 | -44.6 | -51.3 | — | — |
| | 10 | — | — | — | — | — | — | — | — | — | — |
| Helwan 1200 UT | Surface | 31 | 992m.b. | 996m.b. | 988m.b. | 31 | 36.3 | 38.3 | 26.0 | 31 | 12.3 |
| | 1000 | 31 | 72 | 108 | 44 | — | — | — | — | — | — |
| | 850 | 31 | 1494 | 1522 | 1466 | 31 | 20.1 | 24.4 | 14.8 | 27 | 3.0 |
| | 700 | 31 | 3140 | 3173 | 3103 | 31 | 12.0 | 15.4 | 6.8 | 6 | -9.6 |
| | 600 | 31 | 4413 | 4457 | 4369 | 31 | 5.3 | 8.1 | 2.4 | — | — |
| | 500 | 31 | 5878 | 5932 | 5816 | 31 | -3.8 | -0.2 | -7.0 | — | — |
| | 400 | 31 | 7610 | 7683 | 7532 | 31 | -13.8 | -19.5 | -17.5 | — | — |
| | 300 | 30 | 9733 | 9825 | 9641 | 30 | -28.5 | -25.6 | -31.2 | — | — |
| | 250 | — | — | — | — | — | — | — | — | — | — |
| | 200 | 29 | 12519 | 12631 | 12403 | 29 | -49.3 | -45.5 | -51.9 | — | — |
| | 150 | 29 | 14349 | 14477 | 14223 | 29 | -62.9 | -60.5 | -65.4 | — | — |
| | 100 | 29 | 16763 | 16898 | 16652 | 29 | -75.0 | -70.4 | -78.9 | — | — |
| | 70 | 25 | 18867 | 19000 | 19728 | 25 | -68.0 | -62.4 | -72.0 | — | — |
| | 60 | 23 | 19808 | 19912 | 18700 | 23 | -61.2 | -58.2 | -64.1 | — | — |
| | 50 | 20 | 20951 | 21050 | 20868 | 20 | -57.2 | -53.8 | -59.7 | — | — |
| | 40 | 19 | 22372 | 22475 | 22278 | 19 | -54.1 | -51.0 | -58.1 | — | — |
| | 30 | 18 | 24230 | 24355 | 24129 | 18 | -50.8 | -49.3 | -53.0 | — | — |
| | 20 | 16 | 26892 | 27024 | 26782 | 16 | -47.4 | -43.4 | -53.3 | — | — |
| | 10 | 1 | 31572 | — | — | 1 | -45.1 | — | — | — | — |
| Aswan 1200 UT | Surface | 31 | 984m.b. | 988m.b. | 980m.b. | 31 | 38.4 | 42.0 | 36.4 | 31 | 9.6 |
| | 1000 | — | — | — | — | — | — | — | — | — | — |
| | 850 | 31 | 1501 | 1544 | 1432 | 31 | 24.3 | 29.4 | 21.7 | 31 | 11.1 |
| | 700 | 31 | 3163 | 3220 | 3122 | 31 | 11.9 | 18.9 | 7.0 | 23 | -5.2 |
| | 600 | 31 | 4437 | 4514 | 4368 | 31 | 4.7 | 7.8 | 1.6 | 18 | -9.0 |
| | 500 | 31 | 5884 | 5987 | 5836 | 31 | -4.4 | 1.4 | -8.6 | 12 | -15.6 |
| | 400 | 31 | 7627 | 7734 | 7571 | 31 | -13.8 | -10.5 | -17.4 | 2 | -26.7 |
| | 300 | 31 | 9751 | 9888 | 9681 | 31 | -29.2 | -35.8 | -33.4 | 2 | -28.4 |
| | 250 | — | 12532 | 12696 | 12406 | 31 | -48.8 | -46.3 | -53.7 | — | — |
| | 200 | 31 | — | — | — | — | — | — | — | — | — |
| | 150 | 31 | 14355 | 14540 | 14208 | 31 | -68.7 | -60.6 | -66.8 | — | — |
| | 100 | 30 | 16753 | 16965 | 16596 | 30 | -76.6 | -71.5 | -82.2 | — | — |
| | 70 | 20 | 18349 | 19120 | 18010 | 20 | -67.9 | -63.4 | -74.4 | — | — |
| | 60 | — | — | — | — | — | — | — | — | — | — |
| | 50 | 16 | 20932 | 21163 | 20753 | 16 | -57.2 | -52.6 | -61.3 | — | — |
| | 40 | — | — | — | — | — | — | — | — | — | — |
| | 30 | 11 | 24192 | 24514 | 24026 | 11 | -49.8 | -43.6 | -54.3 | — | — |
| | 20 | 9 | 26920 | 27283 | 26683 | 9 | -47.4 | -38.5 | -47.5 | — | — |
| | 10 | 3 | 31561 | 31998 | 31299 | 3 | -37.5 | -29.5 | -44.3 | — | — |

N — The number of cases the element has been observed during the month.

**Table B 2.—MEAN AND EXTREME VALUES OF THE FREEZING LEVEL AND THE TROPOPAUSE;
THE HIGHEST WIND SPEED IN THE UPPER AIR**

AUGUST — 1964

| Station | | Freezing Level | | | | | | | | | First Tropopause | | | | | | | | | Highest wind speed | | | | |
|-----------|--|------------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|------------------|----------------|------------------|----------------|----------------|------------------|----------------|----------------|------------------|--------------------|----------------|----------------------|----------------|----|
| | | Mean | | | Highest | | | Lowest | | | Mean | | | Highest | | | Lowest | | | Altitude (gpm) | Pressure (mb.) | Direction (000—360)° | Speed in Knots | |
| | | Altitude (gpm) | Pressure (mb.) | Dew point (°C) | Altitude (gpm) | Pressure (mb.) | Dew point (°C) | Altitude (gpm) | Pressure (mb.) | Dew point (°C) | Altitude (gpm) | Pressure (mb.) | Temperature (°C) | Altitude (gpm) | Pressure (mb.) | Temperature (°C) | Altitude (gpm) | Pressure (mb.) | Temperature (°C) | | | | | |
| 0000 U.T. | | (N) | (N) | (N) | | | | | | | (N) | (N) | (N) | | | | | | | | | | | |
| | | Mersa Matruh (A) | 4859 (30) | 553 (30) | — — | 5650 | 516 | — | 4100 | 620 | — | 16585 (11) | 107 (11) | —73.7 (11) | 16838 | 100 | —77.9 | 15880 | 124 | —69.2 | 10840 | 252 | 238 | 95 |
| | | Helwan | 5392 (31) | 531 (31) | — — | 6000 | 459 | — | 4800 | 570 | — | 16533 (21) | 104 (21) | —75.7 (21) | 17600 | 86 | —80.8 | 14950 | 135 | —69.5 | 12220 | 203 | 260 | 70 |
| | | Aswan . . . (A) | 5021 (31) | 539 (31) | —1.9 (19) | 5670 | 514 | — | 4540 | 591 | —7.7 | 16559 (22) | 105 (22) | —77.6 (22) | 19650 | 69 | —80.8 | 14880 | 136 | —70.0 | 20250 | 54 | 80 | 69 |
| 1800 U.T. | | (N) | (N) | (N) | | | | | | | (N) | (N) | (N) | | | | | | | | | | | |
| | | Mersa Matruh (A) | 5034 (30) | 557 (30) | — — | 5750 | 510 | — | 4200 | 616 | — | 16134 (15) | 107 (15) | —64.0 (15) | 18370 | 77 | —77.3 | 15290 | 128 | —70.3 | 10900 | 252 | 270 | 77 |
| | | Helwan | 5369 (31) | 536 (31) | — — | 5880 | 502 | — | 4760 | 572 | — | 16546 (28) | 104 (28) | —75.3 (28) | 17560 | 88 | —77.0 | 14920 | 134 | —70.9 | 10800 | 255 | 270 | 65 |
| | | Aswan . . . (A) | 5126 (31) | 550 (31) | —11.4 (16) | 5820 | 506 | — | 4680 | 556 | — | 16630 (19) | 113 (19) | —79.1 (19) | 17200 | 94 | —80.1 | 15040 | 132 | —70.8 | 15500 | 123 | 110 | 78 |

N — The number of cases the element has been observed during the month.

Table B 3.—NUMBER OF OCCURRENCES OF WIND DIRECTION WITHIN SPECIFIED RANGES AND THE MEAN CALAR WIND SPEED AT THE STANDARD AND SELECTED PRESSURE SURFACES

MERSA MATRUH (A) — AUGUST 1964

| Time | Pressure Surface Millibar | Wind between specified ranges of direction (000—360)* | | | | | | | | | | | | | | | | | | | | | | | | Number of calm winds | Total number of observations (TN) | Mean cooler wind |
|-----------|------------------------------|---|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-------------------------|--------------------------------------|------------------|
| | | 345 | | 015 | | 045 | | 075 | | 105 | | 135 | | 165 | | 195 | | 225 | | 255 | | 285 | | 315 | | | | |
| | | / | | / | | / | | / | | / | | / | | / | | / | | / | | / | | / | | / | | | | |
| | | N | (#) | N | (#) | N | (#) | N | (#) | N | (#) | N | (#) | N | (#) | N | (#) | N | (#) | N | (#) | N | (#) | N | (#) | | | |
| | | m | m | m | m | m | m | m | m | m | m | m | m | m | m | m | m | m | m | m | m | m | m | m | m | m | | |
| 0000 U.T. | Surface | 6 | 15 | 2 | 10 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 1 | 6 | 0 | — | 4 | 11 | 4 | 7 | 12 | 10 | 1 | 30 | 10 |
| | 1000 | 6 | 16 | 2 | 12 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 1 | 8 | 3 | 7 | 6 | 10 | 11 | 12 | 1 | 30 | 11 |
| | 850 | 6 | 22 | 9 | 21 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 2 | 16 | 6 | 18 | 6 | 16 | 0 | 29 | 19 |
| | 700 | 2 | 22 | 8 | 16 | 2 | 16 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 1 | 20 | 3 | 19 | 6 | 13 | 7 | 17 | 0 | 29 | 16 |
| | 600 | 4 | 14 | 4 | 18 | 2 | 18 | 0 | — | 0 | — | 0 | — | 0 | — | 1 | 17 | 0 | — | 6 | 20 | 8 | 18 | 4 | 16 | 0 | 29 | 18 |
| | 500 | 3 | 11 | 3 | 12 | 3 | 22 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 2 | 24 | 9 | 21 | 5 | 26 | 4 | 13 | 0 | 29 | 19 |
| | 400 | 3 | 8 | 1 | 35 | 1 | 10 | 1 | 16 | 0 | — | 0 | — | 0 | — | 1 | 7 | 6 | 26 | 9 | 29 | 5 | 20 | 2 | 14 | 0 | 29 | 23 |
| | 300 | 0 | — | 1 | 6 | 1 | 12 | 0 | — | 0 | — | 0 | — | 0 | — | 1 | 47 | 11 | 30 | 9 | 26 | 3 | 46 | 0 | — | 0 | 26 | 30 |
| | 200 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 1 | 17 | 1 | 10 | 9 | 23 | 6 | 36 | 0 | — | 0 | — | 0 | 17 | 27 |
| | 150 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 4 | 16 | 4 | 28 | 1 | 32 | 1 | 20 | 0 | — | 0 | 10 | 29 |
| | 100 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 1 | 18 | 1 | 22 | 2 | 8 | 4 | 11 | 0 | — | 0 | — | 0 | — | 0 | 8 | 12 |
| | 70 | 0 | — | 0 | — | 0 | — | 2 | 9 | 1 | 1 | 1 | 10 | 0 | — | 1 | 4 | 0 | — | 1 | 7 | 0 | — | 0 | — | 0 | 6 | 7 |
| | 60 | 0 | — | 0 | — | 2 | 16 | 3 | 14 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 1 | 4 | 0 | — | 0 | — | 0 | 6 | 13 |
| | 50 | 0 | — | 0 | — | 2 | 17 | 2 | 16 | 2 | 8 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | 6 | 14 |
| 40 | 0 | — | 0 | — | 0 | — | 3 | 25 | 1 | 6 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | 4 | 20 | |
| 30 | 0 | — | 0 | — | 1 | 30 | 2 | 30 | 1 | 9 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | 4 | 25 | |
| 20 | 0 | — | 0 | — | 0 | — | 1 | 23 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | 1 | 23 | |
| 1000 U.T. | Surface | 7 | 15 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 1 | 10 | 0 | — | 1 | 17 | 21 | 15 | 0 | 30 | 15 | | |
| | 1000 | 9 | 16 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 2 | 16 | 19 | 6 | 17 | 0 | 30 | 16 | |
| | 850 | 9 | 16 | 2 | 11 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 2 | 14 | 11 | 14 | 6 | 17 | 0 | 30 | 15 |
| | 700 | 2 | 14 | 4 | 18 | 3 | 16 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 4 | 20 | 14 | 13 | 3 | 17 | 0 | 30 | 15 |
| | 600 | 4 | 8 | 5 | 17 | 1 | 14 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 11 | 16 | 6 | 15 | 3 | 13 | 0 | 30 | 15 |
| | 500 | 4 | 15 | 1 | 9 | 5 | 12 | 0 | — | 0 | — | 0 | — | 0 | — | 5 | 10 | 6 | 21 | 6 | 21 | 3 | 11 | 0 | — | 0 | 30 | 15 |
| | 400 | 2 | 12 | 1 | 15 | 2 | 16 | 1 | 8 | 0 | — | 1 | 5 | 0 | — | 8 | 20 | 13 | 27 | 0 | — | 2 | 13 | 0 | — | 0 | 30 | 21 |
| | 300 | 1 | 4 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 1 | 2 | 13 | 27 | 7 | 33 | 5 | 17 | 0 | — | 0 | 27 | 25 |
| | 200 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 3 | 19 | 12 | 26 | 9 | 38 | 1 | 27 | 0 | — | 0 | 25 | 29 |
| | 150 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 1 | 20 | 5 | 25 | 10 | 29 | 4 | 36 | 1 | 33 | 0 | — | 0 | — | 0 | 21 | 29 |
| | 100 | 0 | — | 0 | — | 0 | — | 0 | — | 1 | 14 | 2 | 8 | 4 | 21 | 1 | 30 | 3 | 32 | 5 | 16 | 0 | — | 0 | — | 0 | 16 | 30 |
| | 70 | 0 | — | 0 | — | 1 | 13 | 3 | 13 | 4 | 19 | 1 | 17 | 0 | — | 0 | — | 1 | 7 | 0 | — | 0 | — | 0 | — | 0 | 10 | 15 |
| | 60 | 0 | — | 0 | — | 0 | — | 3 | 9 | 3 | 18 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | 6 | 14 |
| | 50 | 0 | — | 0 | — | 0 | — | 4 | 16 | 2 | 20 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | 6 | 18 |
| 40 | 0 | — | 0 | — | 1 | 23 | 1 | 23 | 1 | 32 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | 3 | 23 | |
| 30 | 0 | — | 0 | — | 0 | — | 3 | 22 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | 3 | 22 | |
| 20 | 0 | — | 0 | — | 0 | — | 1 | 11 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | 1 | 11 | |

N — The number of cases the wind has been observed from the range of direction during the month.

TN — The total number of cases the wind has been observed for all directions during the month.

Table B 3 (contd.).—NUMBER OF OCCURRENCES OF WIND DIRECTION WITHIN SPECIFIED RANGES AND THE MEAN

SCALAR WIND SPEED AT THE STANDARD AND SELECTED PRESSURE SURFACES

HELWAN—AUGUST 1964

| Time | Pressure Surface Millibar | Wind between specified ranges of direction (000—360)* | | | | | | | | | | | | | | | | | | | | | | | | Number of calm winds | Total number of observations (TN) | Mean scalar wind speed (knots) |
|-----------|------------------------------|---|-----------|----------|-----------|----------|-----------|----------|-----------|----------|-----------|----------|-----------|----------|-----------|----------|-----------|----------|-----------|----------|-----------|----------|-----------|----------|-----------|-------------------------|--------------------------------------|-----------------------------------|
| | | 345 | | 015 | | 045 | | 075 | | 105 | | 135 | | 165 | | 195 | | 225 | | 255 | | 285 | | 315 | | | | |
| | | / 014 | | / 044 | | / 074 | | / 104 | | / 134 | | / 164 | | / 194 | | / 224 | | / 254 | | / 284 | | / 314 | | / 344 | | | | |
| | | N | (ff) m | N | (ff) m | N | (ff) m | N | (ff) m | N | (ff) m | N | (ff) m | N | (ff) m | N | (ff) m | N | (ff) m | N | (ff) m | N | (ff) m | N | (ff) m | | | |
| 0000 U.T. | Surface | 7 | 8 | 12 | 8 | 4 | 7 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 2 | 7 | 5 | 6 | 1 | 31 | 7 | | |
| | 1000 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | | | |
| | 850 | 8 | 9 | 3 | 16 | 4 | 12 | 1 | 5 | 0 | — | 0 | — | 0 | — | 0 | — | 1 | 8 | 2 | 11 | 4 | 14 | 8 | 13 | 12 | | |
| | 700 | 6 | 9 | 4 | 7 | 2 | 6 | 0 | — | 0 | — | 2 | 8 | 3 | 9 | 1 | 8 | 2 | 6 | 1 | 16 | 7 | 13 | 3 | 9 | 10 | | |
| | 600 | 6 | 12 | 3 | 8 | 4 | 8 | 1 | 6 | 1 | 3 | 1 | 7 | 0 | — | 0 | — | 3 | 18 | 4 | 9 | 6 | 12 | 2 | 11 | 11 | | |
| | 500 | 1 | 5 | 2 | 7 | 1 | 7 | 1 | 6 | 0 | — | 1 | 6 | 1 | 6 | 2 | 13 | 4 | 19 | 13 | 11 | 2 | 17 | 3 | 7 | 11 | | |
| | 400 | 1 | 11 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 2 | 12 | 5 | 15 | 10 | 14 | 9 | 22 | 3 | 13 | 0 | — | 16 | | |
| | 300 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 6 | 13 | 12 | 21 | 10 | 22 | 0 | — | 0 | — | 18 | | |
| | 200 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 4 | 14 | 11 | 24 | 8 | 21 | 2 | 28 | 1 | 13 | 0 | — | 19 | | |
| | 150 | 0 | — | 1 | 24 | 0 | — | 0 | — | 0 | — | 0 | — | 8 | 22 | 10 | 20 | 2 | 32 | 3 | 22 | 0 | — | 0 | — | 20 | | |
| | 100 | 0 | — | 0 | — | 0 | — | 1 | 6 | 1 | 27 | 2 | 20 | 8 | 19 | 2 | 22 | 3 | 17 | 0 | — | 1 | 12 | 0 | — | 18 | | |
| | 70 | 0 | — | 1 | 3 | 2 | 16 | 7 | 15 | 1 | 29 | 2 | 14 | 0 | — | 0 | — | 0 | — | 0 | — | 1 | 17 | 0 | — | 15 | | |
| | 60 | 0 | — | 1 | 4 | 1 | 21 | 7 | 20 | 1 | 16 | 1 | 14 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 18 | | |
| 50 | 0 | — | 0 | — | 3 | 24 | 5 | 24 | 1 | 30 | 1 | 14 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 23 | | | |
| 40 | 0 | — | 0 | — | 0 | — | 5 | 28 | 4 | 28 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 9 | | | |
| 30 | 0 | — | 0 | — | 0 | — | 5 | 34 | 1 | 33 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 6 | | | |
| 20 | 0 | — | 0 | — | 0 | — | 1 | 29 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 1 | | | |
| 10 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | | | |
| 1200 U.T. | Surface | 4 | 12 | 3 | 10 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 1 | 7 | 5 | 10 | 11 | 11 | 7 | 12 | 11 | | |
| | 1000 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | | | |
| | 850 | 9 | 8 | 5 | 7 | 1 | 4 | 1 | 9 | 0 | — | 0 | — | 1 | 3 | 1 | 3 | 0 | — | 4 | 13 | 4 | 8 | 5 | 10 | 8 | | |
| | 700 | 3 | 11 | 2 | 15 | 0 | — | 1 | 4 | 0 | — | 0 | — | 2 | 4 | 2 | 5 | 1 | 16 | 9 | 11 | 5 | 13 | 6 | 9 | 10 | | |
| | 600 | 5 | 8 | 2 | 16 | 1 | 4 | 0 | — | 2 | 10 | 0 | — | 0 | — | 2 | 4 | 5 | 10 | 9 | 14 | 1 | 20 | 4 | 10 | 11 | | |
| | 500 | 4 | 10 | 2 | 9 | 1 | 4 | 1 | 2 | 2 | 4 | 0 | — | 2 | 12 | 1 | 4 | 6 | 12 | 9 | 20 | 1 | 6 | 2 | 10 | 13 | | |
| | 400 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 1 | 16 | 6 | 16 | 13 | 17 | 9 | 18 | 1 | 15 | 0 | — | 17 | | |
| | 300 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 2 | 3 | 3 | 21 | 13 | 21 | 8 | 21 | 2 | 16 | 0 | — | 15 | | |
| | 200 | 0 | — | 0 | — | 0 | — | 0 | — | 1 | 14 | 0 | — | 4 | 12 | 7 | 26 | 10 | 23 | 5 | 24 | 1 | 15 | 0 | — | 21 | | |
| | 150 | 0 | — | 0 | — | 0 | — | 1 | 2 | 1 | 18 | 0 | — | 11 | 22 | 8 | 24 | 4 | 25 | 3 | 21 | 1 | 16 | 0 | — | 22 | | |
| | 100 | 0 | — | 0 | — | 0 | — | 0 | — | 3 | 20 | 4 | 19 | 11 | 24 | 4 | 28 | 2 | 14 | 0 | — | 1 | 15 | 1 | 9 | 21 | | |
| | 70 | 0 | — | 0 | — | 0 | — | 1 | 27 | 9 | 23 | 11 | 17 | 1 | 15 | 0 | — | 0 | — | 0 | — | 6 | — | 0 | — | 19 | | |
| | 60 | 0 | — | 0 | — | 0 | — | 4 | 16 | 13 | 22 | 3 | 25 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 21 | | |
| 50 | 0 | — | 0 | — | 1 | 20 | 8 | 24 | 9 | 24 | 1 | 15 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 23 | | | |
| 40 | 0 | — | 0 | — | 0 | — | 8 | 33 | 8 | 32 | 1 | 20 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 27 | | | |
| 30 | 0 | — | 0 | — | 1 | 19 | 10 | 30 | 3 | 37 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 28 | | | |
| 20 | 0 | — | 0 | — | 1 | 41 | 6 | 35 | 2 | 24 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 1 | — | 30 | | | |
| 10 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | | | |

N — The number of cases the winds has been observed from the range of direction during the month.

TN — The total number of cases the wind has been observed for all directions during the month.

Table B 3 (contd.)—NUMBER OF OCCURRENCES OF WIND DIRECTION WITHIN SPECIFIED RANGES AND THE MEAN SCALAR WIND SPEED AT THE STANDARD AND SELECTED PRESSURE SURFACES
ASWAN — AUGUST 1964

| Time | Pressure Surface Millibar | Wind between ranges of direction (000--360)* | | | | | | | | | | | | | | | | | | | | Number of calm winds | Total number of observations (TN) | Mean scalar wind speed (Knots) | | | |
|-----------|------------------------------|--|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------|-----------|--------|-----------|----|----|---|----|-------------------------|--------------------------------------|-----------------------------------|----|----|----|
| | | 345 / 014 | 015 / 044 | 045 / 074 | 075 / 104 | 105 / 134 | 135 / 164 | 165 / 194 | 195 / 224 | 225 / 254 | 255 / 284 | 285 / 314 | 315 / 344 | | | | | | | | | | | | | | |
| | | N m | (ff) m | N m | (ff) m | N m | (ff) m | N m | (ff) m | N m | (ff) m | N m | (ff) m | N m | (ff) m | N m | (ff) m | | | | | | | | | | |
| 0000 U.T. | Surface | 15 | 11 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 1 | 13 | 4 | 9 | 8 | 7 | 3 | 31 | 9 | |
| | 1000 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | |
| | 850 | 5 | 10 | 1 | 17 | 0 | — | 0 | — | 1 | 8 | 0 | — | 1 | 5 | 1 | 5 | 5 | 8 | 5 | 13 | 10 | 12 | 0 | 31 | 11 | |
| | 700 | 1 | 4 | 1 | 10 | 0 | — | 0 | — | 2 | 8 | 1 | 12 | 3 | 19 | 4 | 18 | 8 | 17 | 7 | 15 | 2 | 12 | 0 | 31 | 15 | |
| | 600 | 1 | 5 | 1 | 6 | 1 | 9 | 0 | — | 1 | 7 | 0 | — | 0 | — | 8 | 14 | 10 | 18 | 6 | 15 | 2 | 14 | 1 | 3 | 15 | |
| | 500 | 3 | 10 | 2 | 12 | 5 | 7 | 2 | 12 | 2 | 5 | 2 | 6 | 1 | 2 | 3 | 14 | 6 | 12 | 2 | 8 | 1 | 5 | 2 | 10 | 14 | |
| | 400 | 4 | 6 | 3 | 5 | 8 | 16 | 4 | 12 | 0 | — | 3 | 8 | 3 | 5 | 2 | 12 | 0 | — | 1 | 5 | 3 | 5 | 0 | — | 9 | |
| | 300 | 0 | — | 1 | 4 | 2 | 18 | 7 | 13 | 6 | 16 | 3 | 5 | 3 | 9 | 3 | 6 | 1 | 6 | 0 | — | 1 | 5 | 1 | 11 | 10 | |
| | 200 | 0 | — | 0 | — | 1 | 17 | 8 | 20 | 12 | 13 | 8 | 20 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 1 | 30 | 17 | |
| | 150 | 0 | — | 1 | 37 | 1 | 20 | 5 | 30 | 17 | 24 | 2 | 20 | 1 | 10 | 0 | — | 0 | — | 0 | — | 0 | — | 2 | 29 | 22 | |
| | 100 | 0 | — | 0 | — | 0 | — | 6 | 29 | 8 | 31 | 1 | 29 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | 15 | 30 | |
| | 70 | 0 | — | 0 | — | 0 | — | 4 | 23 | 2 | 20 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | 6 | 22 | |
| 60 | 0 | — | 0 | — | 1 | 30 | 1 | 37 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | 2 | 34 | | |
| 50 | 0 | — | 0 | — | 1 | 26 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | 1 | 26 | | |
| 40 | 0 | — | 0 | — | 0 | — | 1 | 25 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | 1 | 25 | | |
| 30 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | | |
| 20 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | | |
| 10 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | | |
| 1200 U.T. | Surface | 8 | 12 | 1 | 7 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 1 | 10 | 12 | 15 | 8 | 12 | 4 | 13 | 2 | 31 | 12 | |
| | 1000 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | |
| | 850 | 1 | 10 | 1 | 15 | 1 | 7 | 0 | — | 0 | — | 0 | — | 1 | 2 | 1 | 11 | 1 | 18 | 9 | 11 | 11 | 5 | 11 | 0 | 31 | 11 |
| | 700 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 1 | 13 | 1 | 11 | 15 | 18 | 8 | 14 | 4 | 22 | 0 | 31 | 18 | |
| | 600 | 1 | 14 | 0 | — | 0 | — | 1 | 6 | 0 | — | 0 | — | 4 | 17 | 11 | 13 | 6 | 19 | 2 | 18 | 4 | 10 | 1 | 31 | 16 | |
| | 500 | 1 | 12 | 2 | 16 | 3 | 14 | 1 | 19 | 2 | 10 | 1 | 11 | 7 | 14 | 7 | 11 | 6 | 11 | 1 | 7 | 0 | — | 0 | 31 | 12 | |
| | 400 | 0 | — | 6 | 9 | 3 | 18 | 7 | 14 | 4 | 15 | 1 | 7 | 3 | 15 | 2 | 14 | 1 | 14 | 0 | — | 2 | 3 | 2 | 31 | 12 | |
| | 300 | 2 | 3 | 1 | 7 | 6 | 14 | 11 | 17 | 3 | 12 | 6 | 20 | 1 | 7 | 0 | — | 0 | — | 1 | 4 | 0 | — | 0 | 31 | 14 | |
| | 200 | 1 | 10 | 0 | — | 0 | — | 15 | 18 | 9 | 22 | 3 | 14 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 2 | 30 | 17 | |
| | 150 | 0 | — | 0 | — | 3 | 21 | 6 | 27 | 15 | 25 | 1 | 13 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 2 | 27 | 23 | |
| | 100 | 0 | — | 0 | — | 0 | — | 6 | 32 | 10 | 38 | 1 | 16 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | 17 | 34 | |
| | 70 | 0 | — | 0 | — | 0 | — | 6 | 31 | 2 | 42 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | 8 | 34 | |
| 60 | 0 | — | 0 | — | 0 | — | 2 | 38 | 2 | 34 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 1 | 5 | 29 | | |
| 50 | 0 | — | 0 | — | 0 | — | 1 | 30 | 1 | 34 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | 4 | 33 | | |
| 40 | 0 | — | 0 | — | 0 | — | 1 | 44 | 3 | 26 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | 2 | 35 | | |
| 30 | 0 | — | 0 | — | 0 | — | 1 | 40 | 1 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | 1 | 40 | | |
| 20 | 0 | — | 0 | — | 1 | 48 | 0 | — | — | — | — | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | 1 | 40 | | |
| 10 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | | |

N — The number of cases the element has been observed during the month.

TN — The total number of cases the wind has been observed for all directions during the month.

REVIEW OF AGRO — METEOROLOGICAL STATION

EL KASR — AUGUST 1964

Mainly mild but slightly drier than normal, with the maximum temperature about normal during most of the days of the month.

A pronounced heat wave started on the 10 th. with the peak on the next day, when the absolute maximum of air temperature (9.7°C above normal) and the highest values of the daily mean (1.5°C above normal), daytime mean, vapour pressure deficit (40.5 mms) were recorded together with those of evaporation from pan class A and Piche both in the free air at 1.60 and 120 cms above the ground and in the screen (7.4 mms above normal), soil temperature for the surface layers down to 10 cms of depth as well as the lowest values of vapour pressure, relative humidity (58 % below normal) and the daily mean (21 % below normal).

A minor cool spell had its peak on the 20 th. with the lowest evaporation from pan class A and Piche in the free air and in the Screen (3.1 mms below normal).

The highest values of the minimum air temperature at 5 and 200 cms (2.6°C above normal) and the daily mean of vapour pressure occurred on the 25 th. associated with a minor heat wave.

From the 28th. to the end of the month, the air temperature was below normal with the lowest values of sunshine duration and (solar + sky) radiation occurring on that day while the absolute minima of air temperature at 5 and 200 cms (5.3°C below normal) a record which has not been known since 1931, were reported on the last day of the month together with the lowest values of maximum air temperature (1.8°C below normal) the daily mean, daytime mean and also the soil temperature for the surface layer down to 50 cms of depth.

The daily mean air temperature for the month was about normal but the relative humidity was 5 % below whereas the Piche evaporation in the screen was 1.5 mms above normal.

TAHRIR — AUGUST 1964

Mainly mild with consecutive cool spells and heat waves.

A heat wave started on the 10 th. with the peak on the next day, when the highest values of the daily mean of air temperature, daytime mean, evaporation from pan class A and Piche both in the screen and in the free air and soil temperature for the surface layer down to 10 cms of depth were recorded as well as the lowest values of relative humidity (20 %) and the daily mean.

A cool spell followed and gave the lowest maximum air temperature on the 14 th., then a pronounced heat wave started with the absolute maximum air temperature on its peak on the 17th.

Another cool spell was observed during which the lowest values of Piche and pan class A evaporation were reported on the 19th.

A prolonged heat wave had its peak on the 26th., where the highest values of vapour pressure, the daily mean were observed while that of the minimum air temperature occurred on the following day.

Towards the end of the month a distinguished cool spell started with frequent fogs and gave the absolute minima of air temperature at 200 and 5 cms above the ground on the last day together with the lowest values of the daily mean, daytime and night time means, the daily mean of vapour pressure and also the soil temperatures for the surface layers down to 10 cms of depth.

In comparison with last year this month was cooler and drier. The daily mean of air temperature, daytime and night time means and also the daily means of relative humidity, vapour pressure, Piche and pan class A evaporation were all lower by 1.1, 1.3, 0.8°C, 6 %, 0.8, 1.9 and 1.03 mms respectively, while the mean (solar + sky) radiation and the total actual duration of sunshine were slightly more by 12 gm. cal/Cm² and 0.3 hour. No material change was noticed in the mean wind speed at 2 metres. Also the extreme soil temperatures at different depths were generally lower by variable amounts not exceeding 2.5°C.

GIZA —AUGUST 1964

With respect to air temperature and relative humidity this month was about normal.

A prolonged cool spell prevailed during the first ten days and gave the absolute minima of air temperature at 2 metres (2.2°C below normal) and at 5 cms above the dry, wet and grass fields on the 9th. as well as those of the soil for the surface layers down to 50 cms of depth in the three fields.

A heat wave of short duration followed with the peak on the 12th, when the absolute maximum of air temperature (2.6°C above normal) and the highest values of the daily mean (0.9°C above normal) soil temperature in the dry field down to 20 cms of depth and water vapour deficit, occurred and also those of Piche evaporation both in the screen (3.1 mms. above normal) and in the free air at levels 1, 60 and 120 cms above the ground while that of pan class A was reported on the next day. The most pronounced cool spell started on the 13th. and gave the lowest maximum of air temperature (3.7°C below normal) on the following day. Consecutive peaks of minor heat wave and cool spell were observed on the 17th. and the 18th. respectively giving the lowest value of relative humidity (40 % below normal), daily mean (10 % below normal) and vapour pressure on the first day and the highest daily mean relative humidity (34 % above normal) on the second day, but the lowest values of evaporation from Piche in the screen and in the open air were recorded on the 19th, and from pan class A on the 23rd. together with the highest minimum air temperature (3.3°C above normal) associated with a prolonged heat wave.

Compared with the normal values the mean air temperature was below by 0.8°C, while the mean relative humidity and Piche evaporation in the screen were above by 1% and 1.3 mms.

The mean of air temperature for the day, night time and day time and also the means of relative humidity, vapour pressure and Piche evaporation for the day were less than the values of last August by 1.0, 2.8, 1.1°C, 3 %, 0.2 and 1.5 mms respectively where the means of pan class A evaporation and surface wind speed at 2 metres for the day, night time and day time were more by 0.95 mm, 0.4, 0.5 and 0.3 m/sec respectively.

The extreme soil temperatures at the different depths were generally less by variable amounts not exceeding 2.2°C for the three fields except for the surface layer of 2 cms thickness in the dry field where the maxima were higher by no more than 2.2°C. The total actual duration of bright sunshine and potential evapotranspiration for grass were less by 2.1 hours and 24.3 mms respectively where the total potential evaporation was more by 10 mms.

KHARGA — AUGUST 1964

Compared with the normal values, this month was very slightly warmer and remarkably drier.

The first heat wave started on the 4th. with the peak on the following day when the absolute maximum air temperature (3.0°C above normal) and the highest values of the daily mean and the soil temperature at 5 cms of depth were recorded together with the lowest values of relative humidity and the daily mean (22% and 12% below normal) respectively.

The highest values of minimum air temperature at 5, 20 and 200 cms (4.9°C above normal), the means of night time and the day (3.1°C above normal), Piche evaporation in the free air at levels 1, 60 and 120 cms above the ground and the soil temperature at 10 cms of depth were all reported on the 6th.

A minor cool spell followed and gave the absolute minimum air temperature at 2 metres (4.6°C below normal) on the 9th. as well as the lowest values of night time mean, soil temperature at 1 cm and vapour pressure.

The highest values of evaporation from pan class A and Piche in the screen (14.8 mms above normal) occurred on the 14 th. probably due to the highest values of the total radiation and the daily mean of wind speed at 2 metres which were observed on that day. On the 17 th. the lowest values of mean wind speed on that level and Piche evaporation in the free and vapour pressure deficit were reported.

A heat wave started on the 18 th. and gave another value of the absolute maximum air temperature on the 20 th. together with the highest values of vapour pressure deficit and the soil temperature at 20 cms of depth. where that at 50 cms happened on the next day.

A cool spell took place afterwards and gave the lowest values of total (Solar + sky) radiation and pan class A evaporation on the 26 th. while that of Piche in the screen (0.2 mm above normal) was observed on the 28th.

Towards the end of the month the cool spell has intensified and lead to the occurrence of the lowest maximum air temperature (3.7 below normal), absolute minima at 5 and 20 cms above the ground on the last day of the month and also those of soil temperature for the layer 2 to 20 cms of depth.

The means of the maximum air temperature, the daily mean and Piche evaporation in the screen were higher than normal by 0.4 , 0.6°C and 5.9 mms respectively, where that of the relative humidity was lower by 7% .

Table C 1.—AIR TEMPERATURE AT 2 METRES ABOVE GROUND

AUGUST — 1964

| STATION | Air Temperature (°C) | | | | | Mean Duration in hours of daily air temperature above the following values | | | | | | | | | | |
|-------------------|----------------------|-----------|-----------------|-----------------|---------------|--|------|------|------|------|------|------|------|------|------|------|
| | Mean Max. | Mean Min. | Mean of the day | Night time mean | Day time mean | -5°C | 0°C | 5°C | 10°C | 15°C | 20°C | 25°C | 30°C | 35°C | 40°C | 45°C |
| El Kasr | 29.7 | 20.7 | 25.6 | 23.8 | 27.1 | 24.0 | 24.0 | 24.0 | 24.0 | 24.0 | 23.4 | 13.6 | 0.2 | 0.1 | 0.0 | 0.0 |
| Tahrir | 34.6 | 20.7 | 26.7 | 23.6 | 29.1 | 24.0 | 24.0 | 24.0 | 24.0 | 24.0 | 23.5 | 13.5 | 6.7 | 0.3 | 0.0 | 0.0 |
| Giza | 33.9 | 20.7 | 26.9 | 24.4 | 28.9 | 24.0 | 24.0 | 24.0 | 24.0 | 24.0 | 23.7 | 14.4 | 6.7 | 0.2 | 0.0 | 0.0 |
| Kharga | 39.2 | 22.6 | 31.8 | 28.8 | 34.4 | 24.0 | 24.0 | 24.0 | 24.0 | 24.0 | 24.0 | 21.0 | 14.6 | 8.1 | 0.0 | 0.0 |

Table C 2.—ABSOLUTE VALUES OF AIR TEMPERATURE AT 2 METRES ABOVE GROUND, ABSOLUTE MINIMUM AIR TEMPERATURE AT 5cms ABOVE GROUND OVER DIFFERENT FIELDS

AUGUST — 1964

| STATION | Max. Temp. at 2 metres | | | | Min. Temp. at 2 metres | | | | Min. Temp. at 5 cms. above | | | |
|-------------------|------------------------|------|--------|------|------------------------|------|--------|------|----------------------------|------|-------|------|
| | Highest | | Lowest | | Highest | | Lowest | | Dry Soil | | Grass | |
| | Value | Date | Value | Date | Value | Date | Value | Date | Value | Date | Value | Date |
| El Kasr | 39.2 | 11 | 27.7 | 31 | 23.9 | 25 | 16.0 | 31 | 14.7 | 31 | — | — |
| Tahrir | 38.5 | 17 | 31.2 | 14 | 22.6 | 27 | 18.0 | 9 | 15.7 | 31 | — | — |
| Giza | 37.4 | 12 | 30.8 | 14 | 23.1 | 23 | 18.0 | 9 | 14.2 | 9 | 11.8 | 9 |
| Kharga | 42.0 | 5.20 | 35.5 | 31 | 27.8 | 6 | 18.2 | 31 | 17.0 | 31 | — | — |

Table C 3.—(SOLAR + SKY) RADIATION, DURATION OF BRIGHT SUNSHINE, RELATIVE HUMIDITY & VAPOUR PRESSURE AT 2 METRES ABOVE GROUND, EVAPORATION & RAINFALL

AUGUST — 1964

| STATION | Solar+Sky Radiation gm. cal/cm ² | Duration of Bright Sunshine (hours) | | | Relative Humidity % | | | | Vapour Pressure (mms) | | | | | | Evapora- tion(mms) | | Rainfall (mms) | | |
|-------------------|--|-------------------------------------|------------------------|----|---------------------|-----------|--------|------|-----------------------|------------|---------|------|--------|------|-----------------------|---------------|----------------------|----------------------|------|
| | | Total Actual | Total Possible monthly | % | Mean of day | 1200 U.T. | Lowest | Date | Mean of day | 1200 U.T. | Highest | Date | Lowest | Date | Piche | Pan class (A) | Total Amount monthly | Max. fall in one day | Date |
| El Kasr | 514.8 | 371.1 | 411.3 | 90 | — | — | 72 | 63 | 19 | 11 | 18.0 | 18.5 | 21.5 | 16 | 8.3 | 11 | 13.4 | 18.35 | 0.0 |
| Tahrir | 687.3 | 359.2 | 410.4 | 87 | 3.0 | 8.6 | 67 | 38 | 20 | 11 | 16.8 | 14.3 | 22.6 | 26 | 8.7 | 6 | 13.3 | 10.73 | 0.0 |
| Giza | 585.2 | 345.0 | 409.2 | 84 | 2.0 | 6.4 | 67 | 39 | 23 | 17 | 16.4 | 14.4 | 20.8 | 27 | 10.3 | 17 | 13.3 | 10.70 | 0.0 |
| Kharga | 567.0 | 380.8 | 402.3 | 95 | 0 | 0 | 27 | 18 | 12 | 5.8, 9* | 9.2 | 9.3 | 17.1 | 13 | 5.0 | 12 | 31.6 | 18.35 | 0.0 |

* More than 3 days.

**Table C. 4.—EXTREME SOIL TEMPERATURE AT DIFFERENT DEPTHS (cms)
IN DIFFERENT FIELDS**

AUGUST 1964[illegible]

Table C 5.—SURFACE WIND

AUGUST 1964

[illegible]

PRINTED IN U.A.R. BY
THE GENERAL ORGANIZATION
FOR GOVT. PRINTING OFFICES. CAIRO
ALY SULTAN ALY
UNDER-SECRETARY OF STATE
Chairman of the Board of Directors



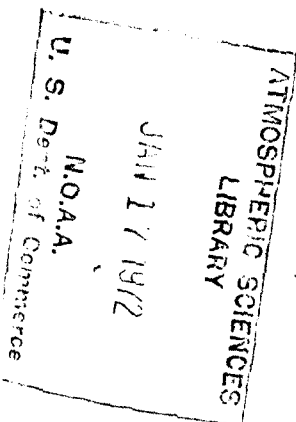
UNITED ARAB REPUBLIC

MONTHLY WEATHER REPORT

VOLUME 7

NUMBER 9

SEPTEMBER, 1964



U.D.C. 551. 506.1 (62)

METEOROLOGICAL DEPARTMENT
CAIRO

PUBLICATIONS OF THE METEOROLOGICAL DEPARTMENT OF THE UNITED ARAB REPUBLIC—CAIRO

In fulfilment of its duties, the U.A.R. Meteorological Department issues several reports and publications on weather, climate and agrometeorology. The principal publications are described on this page.

Orders for publications should be addressed to :

"The Director General, Meteorological Department, Kubri-el-Qubbeh — CAIRO".

THE DAILY WEATHER REPORT

This report is issued daily by the Meteorological Department since the year 1901. It includes surface and upper air observations carried out by the relevant networks of the Republic at the principal hours of observations.

As from January 1968 this report was revised to include a condensed representative selection of surface and upper air observations besides the 1200 U.T. surface & 500 mb charts.

THE MONTHLY WEATHER REPORT

First issued in 1909, the Monthly Weather Report served to give a brief summary of the weather conditions that prevailed over Egypt during the month, with a table showing the mean values for few meteorological elements and their deviations from the normal values. From 1954 to 1957 this report was in a rapid state of development and extension resulting into a voluminous report on January 1958 giving surface, upper air, and agro-meteorological data for U.A.R.

As from January 1964, the Monthly Weather Report was pressed to give climatological data for a representative selection of synoptic stations.

THE AGRO-METEOROLOGICAL ABRIDGED MONTHLY REPORT

Gives a review of weather experienced in the agro-meteorological stations of the U.A.R. as well as monthly values of certain elements.

THE ANNUAL REPORT

This report gives annual values and statistics for the various meteorological elements, together with a summary of the weather conditions that prevailed during all months of the year.

CLIMATOLOGICAL NORMALS FOR EGYPT

A voluminous edition was issued in march 1968 which brings normals and mean values up till 1960.

METEOROLOGICAL RESEARCH BULLETIN

First issued in January 1969 on a bi-annual basis. It includes research works carried out by members of staff of "The Meteorological Institute for Research and Training" and the Operational Divisions of Meteorological Department.

TECHNICAL NOTES

As from October 1970, the Meteorological Department started to issue a new series of publications in the form of Technical Notes (non periodical) on subjects related to studies and applications of meteorology in different fields for the benefit of personnel working in these fields.

The first Technical Note I was issued in October 1970 on : Sandstorms & Duststorms in the U.A.R.



UNITED ARAB REPUBLIC

MONTHLY WEATHER REPORT

VOLUME 7

NUMBER 9

SEPTEMBER, 1964

U.D.C. 551, 506.1 (62)

**METEOROLOGICAL DEPARTMENT
CAIRO**

CONTENTS

PAGES

| | |
|---|-----|
| General Summary of Weather Conditions | 1-2 |
|---|-----|

SURFACE DATA

| | |
|--|-----|
| Table A1.—Monthly values of the Atmospheric Pressure, Air Temperature, Relative Humidity, Bright Sunshine Duration and Piche Evaporation | 3 |
| „ A2.—Maximum and Minimum Air Temperatures | 4 |
| „ A3.—Sky Cover and Rainfall | 5 |
| „ A4.—Number of Days of Occurrence of Miscellaneous Weather Phenomena | 6 |
| „ A5.—Number in Hours of Occurrences of Concurrent Surface Wind Speed and Direction Recorded Within Specified Ranges | 7,8 |

UPPER AIR DATA

| | |
|---|-------|
| Table B1.—Monthly Means and Monthly Absolute Higher & Lower Values of Altitude, air Temperature & Dew point at Standard and Selected Pressure Surfaces. | 9,10 |
| „ B2.—Mean and Extreme values of The Freezing Level and The Tropopause; The Highest Wind Speed in The Upper Air | 11 |
| „ B3.—Number of Occurrences of Wind Direction Within Specified Ranges and The Mean Scalar Wind Speed at the Standard and Selected Pressure Surfaces | 12-14 |

AGRO-METEOROLOGICAL DATA

| | |
|--|-------|
| Review of Agro Meteorological Stations | 15-17 |
| Table C1.—Air Temperature at 2 Metres Above Ground | 18 |
| „ C2.—Absolute Values of Air Temperature at 2 Metres Above Ground, Absolute Minimum Air Temperature at 5 Cms. Above Ground Over Different Field | 18 |
| „ C3.—(Solar + Sky) Radiation, Duration of Bright Sunshine, Relative Humidity and Vapour Pressure at 2 Metres Above Ground, Evaporation and Rainfall | 18 |
| „ C4.—Extreme Soil Temperature at Different Depths in Different Fields | 19 |
| „ C5.—Surface wind | 19 |

Note: For explanatory notes on these data refer to Volume 7 Number 1 (January 1964).

GENERAL SUMMARY OF WEATHER CONDITIONS

SEPTEMBER 1964

Generally mild in the northern and middle parts, and hot in the southern parts particularly between the 14th & 18th. Frequent early morning mist over scattered localities of Delta, Canal and Cairo Areas.

GENERAL DESCRIPTION OF WEATHER

The prevailing weather was generally mild over the northern & middle parts but hot & dry over the southern parts with an excessive heat wave between the 14th & 18th. Light showers fell over few scattered localities of the western parts of the Mediterranean coast in few days. Early morning mist developed over scattered localities of the Delta, Canal & Cairo Areas in more than 10 days.

PRESSURE DISTRIBUTION

The prevailing pressure distribution over the surface map this month can be summarized in the following pressure systems.

- The Complex monsoon low pressure system over Iraq, Arabia and Sudan.
- The monsoon low over the great Sahara of Africa.
- The Anticyclonic ridge over Europe & west Mediterranean.
- The Anticyclonic ridge over southwest Russia, (Caspian) & Black Sea vicinities.
- The transitory deep northern Atlantic depressions through Urasia.

On the other hand the prevailing upper pressure systems at the 700 & 500 mb levels were confined in the two deep upper lows over north Atlantic and north Russia, their attached upper troughs showed prevalence over west Europe and west Russia together with a high pressure belt south latitude 40°N.

During this month five transitory Atlantic deep low pressure systems traversed Europe eastwards, their secondaries approached western vicinities of the Black Sea round the 1st 8th 17th 21st & 28th. Accordingly the monsoon low over Iraq, Arabia & Sudan showed gradual northwest elongation and operated over east & central Mediterranean regions round the 3rd 9th 18th 24th & 28th respectively.

It is worthy to mention that the monthly pressure trend over east Mediterranean in general and U.A.R. in particular was mostly above normal in spite of its practical oscillations.

The subtropical jet stream was evident over the country during the whole month in the upper troposphere at about 140 mb level.

The highest wind speeds recorded at Mersa Matruh, Helwan & Aswan were 130, 93 & 82 on the 17th 27th & 1st respectively.

SURFACE WIND

The prevailing winds were light/moderate in general. Fresh/strong winds blew over scattered localities of the Republic particularly during several days over the Mediterranean (western parts) & Red Sea districts.

No gales were reported during this month.

TEMPERATURE

Maximum air temperature was rather normal in general and showed slight variability in the northern parts and moderate variability over the middle & southern parts.

The absolute maximum temperature for the Republic was 44.1°C reported at Kom Ombo on the 16th.

Minimum air temperature oscillated round normal in the northern & middle parts and below normal in the southern parts.

Cairo, August 1971

The absolute minimum temperature for the Republic was 12.3°C reported at Dakhla on the 28th

PRECIPITATION

This month was almost rainless apart from light showers over scattered localities in the Mediterranean district round the 12th & 23rd.

The absolute daily rainfall was 4.9 mm. reported at Borollos L.H. on the 12th which was also the absolute monthly rainfall for the month.

M. F. TAHA

Under Secretary of State

Director General

Meteorological Department

**TABLE A 1.—MONTHLY VALUES OF THE ATMOSPHERIC PRESSURE, AIR TEMPERATURE,
RELATIVE HUMIDITY, BRIGHT SUNSHINE DURATION & PICHE EVAPORATION**

SEPTEMBER — 1964

| STATION | Atmospheric Pressure (mbs) M.S.L | | Air Temperature °C | | | | | | | | Relative Humidity % | | Bright Sunshine Duration (Hours) | | | Piche Evaporation mms. Mean | |
|------------------|--|--------------------------|--------------------|--------------------------|-------------|--------------------------|----------|----------|--------------------------|----------|--------------------------|------|-------------------------------------|-----------------|-------------------|--------------------------------|------|
| | | | Maximum | | Minimum | | A+B 2 | Dry Bulb | | Wet Bulb | | | | | | | |
| | Mean | D.F Normal or Average | (A) Mean | D.F Normal or Average | (B) Mean | D.F Normal or Average | | Mean | D.F Normal or Average | Mean | D.F Normal or Average | Mean | D.F Normal or Average | Total Actual | Total Possible | | % |
| Sallam | 1014.8 | +0.9 | 28.9 | -0.3 | 19.5 | -1.6 | 24.2 | 23.9 | -1.2 | 19.2 | -0.9 | 62 | 0 | — | — | — | 9.4 |
| Mersa Matruh (A) | 1014.6 | +0.9 | 27.7 | -1.0 | 19.4 | -0.3 | 23.6 | 23.4 | -1.0 | 19.3 | -0.8 | 66 | -1 | 322.9 | 371.1 | 87.0 | 8.5 |
| Alexandria (A) | 1013.4 | +0.8 | 28.7 | -0.7 | 20.2 | -1.1 | 24.4 | 24.2 | -1.1 | 26.1 | -1.1 | 67 | -2 | 327.7 | 370.8 | 88.4 | 6.4 |
| Port Said (A) | 1012.5 | +0.3 | 27.5 | -1.7 | 23.1 | -0.8 | 25.3 | 25.5 | -0.7 | 21.1 | -1.1 | 66 | -4 | 325.8 | 370.8 | 87.8 | 5.9 |
| El Arish | 1012.4 | +1.2 | 29.7 | -0.1 | 20.6 | +0.3 | 25.2 | 25.1 | -0.4 | 21.6 | -0.3 | 72 | +2 | 325.4 | 368.7 | 88.3 | 6.7 |
| Gharza | 1011.9 | +0.6 | 27.3 | -1.1 | 19.9 | -0.7 | 23.6 | 24.5 | -0.7 | 20.8 | -1.0 | 70 | -3 | 287.0 | 371.1 | 77.3 | 5.9 |
| Tanta | 1012.4 | — | 31.6 | — | 17.8 | — | 24.2 | 23.9 | — | 19.0 | — | 61 | — | 318.0 | 370.3 | 5.9 | 5.5 |
| Cairo (A) | 1012.6 | +0.4 | 31.5 | -0.8 | 19.3 | -0.6 | 25.4 | 24.8 | -1.0 | 19.1 | -1.2 | 56 | -2 | — | — | — | 15.1 |
| Fayoum | 1012.0 | — | 33.8 | — | 18.9 | — | 26.4 | 25.1 | — | 18.7 | — | 52 | — | — | — | — | 9.9 |
| Minya (A) | 1012.1 | +1.0 | 32.0 | -1.4 | 17.4 | -1.2 | 24.7 | 24.4 | -1.4 | 19.0 | -0.7 | 57 | +2 | — | — | — | 8.5 |
| Assyout (A) | 1011.3 | +1.0 | 33.1 | -2.0 | 18.9 | -1.2 | 26.0 | 26.0 | -1.8 | 17.5 | -1.3 | 39 | +1 | — | — | — | 18.9 |
| Luxor (A) | 1008.9 | +0.7 | 36.7 | -1.8 | 19.9 | -1.4 | 28.3 | 27.4 | -2.7 | 18.6 | -0.8 | 39 | +7 | — | — | — | 10.7 |
| Aswan (A) | 1008.9 | +1.0 | 37.8 | -2.2 | 20.7 | -3.3 | 29.2 | 29.4 | -1.4 | 16.8 | -0.4 | 21 | +2 | — | — | — | 20.3 |
| Siwa | 1014.4 | +1.0 | 32.3 | -2.3 | 17.5 | -0.8 | 24.9 | 25.2 | -2.0 | 17.4 | -1.4 | 42 | +1 | — | — | — | 11.7 |
| Bahariya | 1012.7 | +0.7 | 31.7 | -1.8 | 18.2 | -0.1 | 25.0 | 25.7 | -0.6 | 17.8 | -0.6 | 43 | -1 | — | — | — | 8.7 |
| Farafra | 1014.4 | — | 32.3 | — | 17.2 | — | 24.8 | 24.9 | — | 16.7 | — | 39 | — | — | — | — | 16.4 |
| Dakhla | 1010.4 | +1.0 | 33.6 | -2.1 | 18.4 | -2.2 | 26.0 | 26.1 | -1.3 | 16.5 | -0.2 | 33 | +5 | — | — | — | 19.8 |
| Kharga | 1011.3 | — | 34.6 | — | 20.0 | — | 27.3 | 27.6 | — | 16.8 | — | 28 | — | 345.3 | 368.6 | 93.9 | 27.2 |
| Tor | 1008.5 | +0.8 | 30.0 | -2.0 | 22.2 | +0.3 | 26.1 | 26.8 | -0.5 | 21.2 | -0.5 | 59 | 0 | — | — | — | 10.8 |
| Hurgada | 1008.8 | +1.0 | 31.2 | +0.6 | 22.3 | -0.9 | 26.8 | 27.0 | -0.8 | 20.0 | -1.4 | 49 | -5 | — | — | — | 22.3 |
| Quesir | 1009.3 | +1.6 | 30.4 | -1.6 | 23.9 | -1.4 | 27.5 | 27.4 | -0.7 | 20.6 | -0.8 | 51 | -2 | — | — | — | 17.5 |

Table A 2.— MAXIMUM AND MINIMUM AIR TEMPERATURES

SEPTEMBER — 1964

| Station | Maximum Temperature °C | | | | | | | | | Grass Min. Temp. | | Minimum Temperature °C | | | | | | | |
|----------------------------|------------------------|-------|--------|-------|----------------------------|-----|-----|-----|-----|------------------|------------------|------------------------|-------|--------|------|-----------------------------|----|----|-----|
| | Highest | Date | Lowest | Date | No. of Days with Max-Temp. | | | | | Mean | Dev. From Normal | Highest | Date | Lowest | Date | No. of Days with Min. Temp. | | | |
| | | | | | > | >30 | >35 | >40 | >45 | | | | | | | <10 | <5 | <0 | <-5 |
| | | | | | | | | | | | | | | | | | | | |
| Sallum | 31.8 | 22 | 26.8 | 23 | 30 | 6 | 0 | 0 | 0 | 17.8 | — | 22.6 | 3,9 | 15.4 | 13 | 0 | 0 | 0 | 0 |
| Mersa Matruh (A) | 29.7 | 27 | 25.5 | 28 | 30 | 0 | 0 | 0 | 0 | — | — | 23.0 | 4,5 | 15.6 | 24 | 0 | 0 | 0 | 0 |
| Alexandria (A) | 30.6 | 2 | 26.4 | 24,29 | 30 | 2 | 0 | 0 | 0 | — | — | 23.5 | 7 | 15.0 | 27 | 0 | 0 | 0 | 0 |
| Port Said (A) | 30.1 | 7 | 26.3 | 29,30 | 30 | 1 | 0 | 0 | 0 | 22.4 | — | 25.4 | 2 | 21.2 | 29 | 0 | 0 | 0 | 0 |
| El Arish | 30.9 | 23 | 27.0 | 30 | 30 | 10 | 0 | 0 | 0 | 18.9 | — | 25.0 | 3 | 17.0 | 28 | 0 | 0 | 0 | 0 |
| Ghazze | 29.0 | 8 | 25.5 | 30 | 30 | 0 | 0 | 0 | 0 | 19.3 | — | 22.5 | 5 | 17.8 | 29 | 0 | 0 | 0 | 0 |
| Tanta | 34.6 | 7 | 28.2 | 24 | 30 | 23 | 0 | 0 | 0 | — | — | 21.1 | 10 | 14.3 | 27 | 0 | 0 | 0 | 0 |
| Cairo (A) | 34.8 | 16 | 28.4 | 24 | 30 | 24 | 0 | 0 | 0 | — | — | 22.0 | 10,23 | 15.9 | 27 | 0 | 0 | 0 | 0 |
| Fayoum | 35.3 | 7,8 | 29.7 | 24 | 30 | 27 | 2 | 0 | 0 | 16.4 | — | 16.3 | 29 | 16.1 | 21 | 0 | 0 | 0 | 0 |
| Minya (A) | 35.0 | 16 | 28.6 | 30 | 30 | 25 | 0 | 0 | 0 | 14.8 | — | 20.9 | 8 | 13.5 | 28 | 0 | 0 | 0 | 0 |
| Assyout (A) | 37.3 | 21 | 30.2 | 30 | 30 | 30 | 5 | 0 | 0 | 15.7 | — | 21.6 | 9 | 16.6 | 26 | 0 | 0 | 0 | 0 |
| Luxor (A) | 41.0 | 16 | 33.0 | 12 | 30 | 30 | 24 | 1 | 0 | — | — | 23.0 | 17 | 16.8 | 28 | 0 | 0 | 0 | 0 |
| Aswan (A) | 42.2 | 16,17 | 34.2 | 12 | 30 | 30 | 28 | 3 | 0 | — | — | 24.2 | 17 | 17.5 | 26 | 0 | 0 | 0 | 0 |
| Siwa | 35.3 | 16 | 28.6 | 28 | 30 | 25 | 1 | 0 | 0 | 15.9 | — | 20.6 | 23 | 13.8 | 26 | 0 | 0 | 0 | 0 |
| Behariya | 35.8 | 22 | 29.5 | 30 | 30 | 27 | 2 | 0 | 0 | 16.8 | — | 21.0 | 7 | 14.7 | 25 | 0 | 0 | 0 | 0 |
| Farafra | 35.1 | 22 | 29.1 | 24 | 30 | 26 | 1 | 0 | 0 | 16.5 | — | 19.7 | 23 | 13.9 | 26 | 0 | 0 | 0 | 0 |
| Dakhla | 36.6 | 21 | 30.2 | 12 | 30 | 30 | 8 | 0 | 0 | 13.4 | — | 21.7 | 1 | 12.3 | 28 | 0 | 0 | 0 | 0 |
| Kharga | 38.2 | 16 | 31.2 | 30 | 30 | 30 | 10 | 0 | 0 | 18.7 | — | 23.6 | 22 | 16.2 | 20 | 0 | 0 | 0 | 0 |
| Tor | 33.4 | 23 | 27.4 | 25 | 30 | 17 | 0 | 0 | 0 | — | — | 25.6 | 2 | 18.1 | 30 | 0 | 0 | 0 | 0 |
| Hurgada | 33.5 | 9 | 28.5 | 30 | 30 | 26 | 0 | 0 | 0 | 21.3 | — | 25.0 | 2 | 18.4 | 30 | 0 | 0 | 0 | 0 |
| Quseir | 32.2 | 8 | 28.6 | 26,27 | 30 | 18 | 0 | 0 | 0 | 20.2 | — | 26.0 | 1 | 22.1 | 30 | 0 | 0 | 0 | 0 |

Table A 3.—SKY COVER AND RAINFALL

SEPTEMBER — 1964

| Station | Mean Sky Cover Oct | | | | | Rainfall mm | | | | | | | | | | |
|----------------------------|--------------------|------------|------------|------------|---------------|-----------------|---------------------|-------------------------|------|------------------------------------|-------|-------|-------|------|------|------|
| | 00 U.T. | 06 U.T. | 12 U.T. | 18 U.T. | Daily Mean | Total Amount | Dev. From Normal | Max. Fall in one day | | Number of Days With Amount of Rain | | | | | | |
| | | | | | | | | Amount | Date | < 0.1 | ≥ 0.1 | ≥ 1.0 | ≥ 5.0 | ≥ 10 | ≥ 25 | ≥ 50 |
| | | | | | | | | | | | | | | | | |
| Sallam | 1.0 | 1.8 | 2.1 | 1.3 | 1.4 | 0.0 | — 0.9 | 0.0 | — | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Mersa Matruh (A) | 1.2 | 2.6 | 2.2 | 1.4 | 1.8 | 2.5 | + 1.9 | 2.5 | 24 | 0 | 1 | 1 | 0 | 0 | 0 | 0 |
| Alexandria (A) | 2.4 | 3.0 | 2.0 | 1.9 | 2.3 | 1.3 | + 0.9 | 1.0 | 11 | 0 | 2 | 1 | 0 | 0 | 0 | 0 |
| Port Said (A) | 0.9 | 1.8 | 0.9 | 0.7 | 1.0 | 0.0 | — 0.1 | 0.0 | — | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| El Arish | 3.0 | 2.1 | 1.4 | 2.8 | 2.6 | 0.0 | — 0.7 | 0.0 | — | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ghazza | 2.7 | 2.3 | 0.8 | 1.9 | 2.5 | 0.0 | — 0.2 | 0.0 | — | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Tanta | — | 1.2 | 1.4 | 0.1 | — | 0.0 | — 0.2 | 0.0 | — | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Cairo (A) | 1.6 | 2.3 | 1.5 | 0.5 | 1.7 | 0.0 | — Tr. | 0.0 | — | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Fayoum | — | 0.5 | 0.4 | 0.0 | — | 0.0 | 0.0 | 0.0 | — | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Minya (A) | 0.0 | 1.2 | 0.2 | 0.0 | 0.3 | 0.0 | — 0.1 | 0.0 | — | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Assyout (A) | 0.0 | 0.7 | 0.0 | 0.0 | 0.1 | 0.0 | 0.0 | 0.0 | — | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Luxor (A) | 0.1 | 0.2 | 0.2 | 0.2 | 0.4 | 0.0 | 0.0 | 0.0 | — | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Aswan (A) | 0.2 | 0.6 | 0.4 | 0.5 | 0.3 | 0.0 | — Tr. | 0.0 | — | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Siwa | 0.1 | 1.3 | 1.0 | 1.0 | 0.5 | 0.0 | 0.0 | 0.0 | — | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Bahariya | 0.0 | 1.6 | 0.3 | 0.0 | 0.4 | 0.0 | — Tr. | 0.0 | — | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Farafra | 0.0 | 0.1 | 0.3 | 0.0 | 0.3 | 0.0 | 0.0 | 0.0 | — | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Dakhla | 0.0 | 0.3 | 0.1 | 0.1 | 0.1 | 0.0 | 0.0 | 0.0 | — | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Kharga | 0.0 | 0.2 | 0.3 | 0.1 | 0.2 | 0.0 | 0.0 | 0.0 | — | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Tor | 0.0 | 0.0 | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | — | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Hurgada | 0.0 | 0.0 | 0.0 | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 | — | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Quesir | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | — Tr. | 0.0 | — | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

Table A 4.—DAYS OF OCCURRENCE OF MISCELLANEOUS WEATHER PHENOMENA.

SEPTEMBER — 1964

| Station | Precipitation | | | | Frost | Thunderstorm | Mist Vis \geq 1000 metres | Fog Vis $<$ 1000 Metres | Haze Vis \geq 1000 Metres | Thick Haze Vis $<$ 1000 Metres | Dust or Sandrising Vis \geq 1000 Metres | Dust or Sandstorm Vis $<$ 1000 Metres | Gale | Clear Sky | Cloudy Sky |
|----------------------------|---------------|------|--------------|------|-------|--------------|-----------------------------|-------------------------|-----------------------------|--------------------------------|---|---------------------------------------|------|-----------|------------|
| | Rain | Snow | Ice, Pellets | Hail | | | | | | | | | | | |
| Sallum | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 21 | 0 |
| Mersa Matruh (A) | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 17 | 0 |
| Alexandria (A) | 2 | 0 | 0 | 0 | 0 | 0 | 2 | 1 | 0 | 0 | 0 | 0 | 0 | 12 | 0 |
| Port Said (A) | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 27 | 0 |
| El Arish | 0 | 0 | 0 | 0 | 0 | 0 | 5 | 0 | 2 | 0 | 1 | 0 | 0 | 9 | 0 |
| Ghazza | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 12 | 0 |
| Tanta | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | — | — |
| Cairo (A) | 0 | 0 | 0 | 0 | 0 | 0 | 14 | 4 | 5 | 0 | 0 | 0 | 0 | 19 | 0 |
| Fayoum | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | — | — |
| Minya (A) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 30 | 0 |
| Assyout (A) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 30 | 0 |
| Luxor (A) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 30 | 0 |
| Aswan (A) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 30 | 0 |
| Siwa | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 30 | 0 |
| Bahariya | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 29 | 0 |
| Farafra | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 30 | 0 |
| Dakhla | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 30 | 0 |
| Kharga | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 30 | 0 |
| Tor | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 30 | 0 |
| Hurgada | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 30 | 0 |
| Quesir | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 30 | 0 |

**Table A 5.—NUMBER IN HOURS OF OCCURRENCES OF CONCURRENT SURFACE
WIND SPEED AND DIRECTION RECORDED WITHIN SPECIFIED RANGES**

SEPTEMBER — 1964

| Station | calm (hours) | Variable (hours) | Unrecorded (hours) | Wind speed in knots | Number in hours of occurrences of wind blowing from the ranges of directions indicated | | | | | | | | | | | | | All directions |
|------------------------|--------------|------------------|--------------------|------------------------|---|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|----------------|
| | | | | | 345 | 015 | 045 | 075 | 105 | 135 | 165 | 195 | 225 | 255 | 285 | 315 | | |
| | | | | | / | / | / | / | / | / | / | / | / | / | / | / | | |
| | | | | | 014 | 044 | 074 | 104 | 134 | 164 | 194 | 224 | 254 | 284 | 314 | 344 | | |
| Sallum | 2 | 2 | 0 | 1-10 | 39 | 88 | 41 | 13 | 4 | 1 | 3 | 10 | 11 | 31 | 95 | 121 | 457 | |
| | | | | 11-27 | 37 | 56 | 1 | 0 | 0 | 0 | 0 | 4 | 13 | 73 | 75 | 259 | | |
| | | | | 28-47 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | |
| | | | | ≥ 48 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | |
| | | | | All speeds | 76 | 144 | 42 | 13 | 4 | 1 | 3 | 10 | 15 | 44 | 168 | 196 | 716 | |
| Mersa Matruh . . (A) | 21 | 1 | 10 | 1-10 | 78 | 22 | 7 | 5 | 1 | 4 | 7 | 20 | 34 | 66 | 18 | 41 | 303 | |
| | | | | 11-27 | 155 | 16 | 0 | 0 | 0 | 0 | 1 | 3 | 3 | 7 | 16 | 184 | 385 | |
| | | | | 28-47 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | |
| | | | | ≥ 48 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | |
| | | | | All speeds | 233 | 38 | 7 | 5 | 1 | 4 | 8 | 23 | 37 | 73 | 34 | 225 | 688 | |
| Alexandria (A) | 7 | 0 | 0 | 1-10 | 135 | 29 | 8 | 10 | 3 | 7 | 13 | 26 | 6 | 6 | 44 | 151 | 438 | |
| | | | | 11-27 | 74 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 36 | 158 | 275 | |
| | | | | 28-47 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | |
| | | | | ≥ 48 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | |
| | | | | All speeds | 209 | 34 | 8 | 10 | 3 | 7 | 13 | 26 | 6 | 6 | 80 | 309 | 713 | |
| Port Said | 0 | 1 | 0 | 1-10 | 174 | 15 | 2 | 2 | 4 | 7 | 2 | 4 | 31 | 46 | 36 | 216 | 539 | |
| | | | | 11-27 | 47 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5 | 16 | 21 | 91 | 180 | |
| | | | | 28-47 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | |
| | | | | ≥ 48 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | |
| | | | | All speeds | 221 | 15 | 2 | 2 | 4 | 7 | 2 | 4 | 36 | 62 | 57 | 307 | 719 | |
| Ghazza | 0 | 36 | 3 | 1-10 | 39 | 4 | 11 | 23 | 17 | 168 | 16 | 4 | 18 | 37 | 88 | 117 | 542 | |
| | | | | 11-27 | 51 | 5 | 0 | 0 | 0 | 0 | 0 | 2 | 6 | 6 | 0 | 54 | 139 | |
| | | | | 28-47 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | |
| | | | | ≥ 48 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | |
| | | | | All speeds | 90 | 9 | 11 | 23 | 17 | 168 | 16 | 6 | 24 | 43 | 88 | 171 | 681 | |
| Tanta | 47 | 17 | 0 | 1-10 | 132 | 47 | 10 | 8 | 3 | 0 | 0 | 10 | 48 | 112 | 118 | 168 | 656 | |
| | | | | 11-27 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | |
| | | | | 28-47 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | |
| | | | | ≥ 48 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | |
| | | | | All speeds | 132 | 47 | 10 | 8 | 3 | 0 | 0 | 10 | 48 | 112 | 118 | 168 | 656 | |
| Cairo | 0 | 6 | 62 | 1-10 | 112 | 92 | 65 | 20 | 8 | 1 | 0 | 2 | 3 | 12 | 22 | 51 | 388 | |
| | | | | 11-27 | 111 | 80 | 31 | 4 | 5 | 4 | 0 | 0 | 0 | 0 | 14 | 15 | 264 | |
| | | | | 28-47 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | |
| | | | | ≥ 48 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | |
| | | | | All speeds | 223 | 172 | 96 | 24 | 13 | 5 | 0 | 2 | 3 | 12 | 36 | 66 | 652 | |
| Fayoum (A) | 7 | 0 | 0 | 1-10 | 466 | 47 | 1 | 5 | 0 | 0 | 0 | 1 | 1 | 7 | 20 | 159 | 707 | |
| | | | | 11-27 | 4 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 6 | |
| | | | | 28-47 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| | | | | ≥ 48 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| | | | | All speeds | 470 | 48 | 1 | 5 | 0 | 0 | 0 | 1 | 1 | 7 | 20 | 160 | 713 | |

**Table A 5 (contd.)—NUMBER IN HOURS OF OCCURRENCES OF CONCURRENT SURFACE
WIND SPEED AND DIRECTION RECORDED WITHIN SPECIFIED RANGES**

SEPTEMBER — 1964

| Station | calm (hours) | variable (hours) | unrecorded (hours) | Wind speed in knots | Number in hours of occurrences of wind blowing from the range of direction indicated | | | | | | | | | | | | | All directions |
|----------------------|--------------|------------------|--------------------|------------------------|---|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|-----|----------------|
| | | | | | 345 / 014 | 015 / 044 | 045 / 074 | 075 / 104 | 105 / 134 | 135 / 164 | 165 / 194 | 195 / 224 | 225 / 254 | 255 / 284 | 285 / 314 | 315 / 344 | | |
| | | | | | | | | | | | | | | | | | | |
| Minya | 11 | 0 | 11 | 1-10 | 34 | 7 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 3 | 44 | 295 | 335 | |
| | | | | 11-27 | 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 302 | 313 | |
| | | | | 28-47 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| | | | | ≥ 48 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| | | | | All speeds | 42 | 7 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 3 | 47 | 597 | 638 | |
| Assyut (A) | 0 | 0 | 0 | 1-10 | 8 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 9 | 168 | 138 | 92 | 416 | |
| | | | | 11-27 | 6 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 7 | 53 | 229 | 304 | |
| | | | | 28-47 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| | | | | ≥ 48 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| | | | | All speeds | 14 | 10 | 0 | 0 | 0 | 0 | 0 | 0 | 9 | 175 | 191 | 321 | 720 | |
| Luxor (A) | 11 | 0 | 0 | 1-10 | 13 | 26 | 4 | 7 | 8 | 23 | 135 | 98 | 44 | 49 | 83 | 170 | 660 | |
| | | | | 11-27 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 3 | 40 | 49 | | |
| | | | | 28-47 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | |
| | | | | ≥ 48 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | |
| | | | | All speeds | 18 | 26 | 4 | 7 | 8 | 23 | 135 | 98 | 45 | 49 | 86 | 210 | 709 | |
| Aswan (A) | 1 | 5 | 30 | 1-10 | 71 | 259 | 150 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 12 | 501 | |
| | | | | 11-27 | 57 | 84 | 34 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 183 | |
| | | | | 28-47 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | |
| | | | | ≥ 48 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | |
| | | | | All speeds | 128 | 343 | 184 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 18 | 684 | |
| Siwa | 108 | 34 | 5 | 1-10 | 90 | 79 | 59 | 28 | 14 | 9 | 7 | 4 | 3 | 19 | 76 | 114 | 502 | |
| | | | | 11-27 | 7 | 15 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 4 | 44 | 76 | |
| | | | | 28-47 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | |
| | | | | ≥ 48 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | |
| | | | | All speeds | 97 | 94 | 62 | 28 | 14 | 9 | 7 | 4 | 3 | 22 | 80 | 158 | 578 | |
| Dakhla | 0 | 10 | 2 | 1-10 | 197 | 76 | 5 | 2 | 3 | 1 | 5 | 12 | 20 | 54 | 102 | 224 | 701 | |
| | | | | 11-27 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 7 | |
| | | | | 28-47 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | |
| | | | | ≥ 48 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | |
| | | | | All speeds | 203 | 76 | 5 | 2 | 3 | 1 | 5 | 12 | 20 | 54 | 102 | 225 | 708 | |
| Hurghada | 0 | 0 | 0 | 1-10 | 3 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 30 | 7 | 46 | |
| | | | | 11-27 | 118 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 25 | 165 | 299 | 612 | |
| | | | | 28-47 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 61 | 62 | | |
| | | | | ≥ 48 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | |
| | | | | All speeds | 123 | 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 28 | 195 | 367 | 720 | |
| Quesir | 2 | 8 | 0 | 1-10 | 60 | 10 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 18 | 142 | 153 | 386 | |
| | | | | 11-27 | 181 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 138 | 323 | |
| | | | | 28-47 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | | |
| | | | | ≥ 48 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | |
| | | | | All speeds | 241 | 12 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 18 | 144 | 292 | 710 | |

UPPER AIR CLIMATOLOGICAL DATA

**Table B 1. — MONTHLY MEANS AND MONTHLY ABSOLUTE HIGHER AND LOWER VALUES OF ALTITUDE, AIR TEMPERATURE AND DEW POINT AT STANDARD AND SELECTED PRESSURE SURFACES
SEPTEMBER — 1964**

| Station | Pressure Surface (Millibar) | Altitude of Pressure Surface (gpm) | | | | Temperature (°C) | | | | Dew Point (°C) | |
|----------------------|-----------------------------|------------------------------------|----------|----------|----------|------------------|-------|---------|--------|----------------|-------|
| | | N | Mean | Highest | Lowest | N | Mean | Highest | Lowest | N | Mean |
| Mersa Matruh 0000 UT | Surface . . . | 30 | 1015m.b. | 1021m.b. | 1012m.b. | 30 | 21.5 | 23.8 | 17.8 | 30 | 17.9 |
| | 1000 . . . | 30 | 154 | 208 | 122 | 30 | 21.0 | 23.0 | 17.1 | 30 | 17.2 |
| | 850 . . . | 30 | 1548 | 1589 | 1509 | 30 | 14.2 | 19.4 | 7.6 | 24 | 2.4 |
| | 700 . . . | 30 | 3165 | 3220 | 3124 | 30 | 7.5 | 12.2 | 1.5 | 4 | -5.5 |
| | 600 . . . | 30 | 4419 | 4479 | 4362 | 30 | 0.9 | 6.2 | -5.0 | 1 | -14.3 |
| | 500 . . . | 30 | 5823 | 5925 | 5770 | 30 | -8.8 | -4.8 | -13.9 | — | — |
| | 400 . . . | 30 | 7550 | 7616 | 7435 | 30 | -20.5 | -14.8 | -24.9 | — | — |
| | 300 . . . | 30 | 9619 | 9717 | 9492 | 30 | -34.7 | -29.6 | -40.0 | — | — |
| | 250 . . . | — | — | — | — | — | — | — | — | — | — |
| | 200 . . . | 29 | 12359 | 12484 | 12198 | 29 | -53.2 | -50.0 | -58.8 | — | — |
| | 150 . . . | 28 | 14155 | 14284 | 13997 | 28 | -64.2 | -61.4 | -66.9 | — | — |
| | 100 . . . | 25 | 16596 | 16737 | 16453 | 25 | -70.1 | -63.7 | -74.7 | — | — |
| | 70 . . . | 22 | 18742 | 18820 | 18620 | 22 | -65.2 | -59.9 | -70.6 | — | — |
| | 60 . . . | — | — | — | — | — | — | — | — | — | — |
| | 50 . . . | 21 | 20828 | 20912 | 20708 | 21 | -58.2 | -52.2 | -61.6 | — | — |
| | 40 . . . | — | — | — | — | — | — | — | — | — | — |
| | 30 . . . | 14 | 24094 | 24174 | 23936 | 14 | -53.2 | -51.5 | -54.9 | — | — |
| | 20 . . . | 8 | 26724 | 26794 | 26580 | 8 | -47.7 | -46.1 | -50.4 | — | — |
| | 10 . . . | 2 | 31408 | 31425 | 31390 | 2 | -40.0 | -39.8 | -40.3 | — | — |
| Helwan 0000 UT | Surface . . . | 30 | 996m.b. | 1003m.b. | 992m.b. | 30 | 21.0 | 22.8 | 18.8 | 30 | 16.1 |
| | 1000 . . . | 30 | 111 | 165 | 84 | 4 | 19.3 | 19.9 | 18.6 | 4 | 11.7 |
| | 850 . . . | 30 | 1506 | 1544 | 1477 | 30 | 16.7 | 21.9 | 11.1 | 22 | 1.3 |
| | 700 . . . | 30 | 3140 | 3192 | 3098 | 30 | 11.2 | 14.7 | 6.5 | 1 | -8.6 |
| | 600 . . . | 30 | 4407 | 4467 | 4348 | 30 | 4.0 | 8.3 | 0.0 | — | — |
| | 500 . . . | 30 | 5863 | 5915 | 5776 | 30 | -5.8 | -2.2 | -11.5 | — | — |
| | 400 . . . | 30 | 7572 | 7627 | 7535 | 30 | -11.1 | -13.6 | -21.1 | — | — |
| | 300 . . . | 30 | 9663 | 9739 | 9549 | 30 | -31.3 | -29.0 | -35.0 | — | — |
| | 250 . . . | — | — | — | — | — | — | — | — | — | — |
| | 200 . . . | 30 | 12406 | 12514 | 12302 | 30 | -51.3 | -49.6 | -55.3 | — | — |
| | 150 . . . | 30 | 14217 | 14339 | 14107 | 30 | -64.5 | -62.4 | -66.8 | — | — |
| | 100 . . . | 29 | 16628 | 16734 | 16505 | 29 | -73.7 | -68.6 | -76.7 | — | — |
| | 70 . . . | 26 | 18752 | 18880 | 18640 | 26 | -67.3 | -65.0 | -74.8 | — | — |
| | 60 . . . | 21 | 19678 | 19750 | 19565 | 21 | -63.1 | -60.2 | -67.0 | — | — |
| | 50 . . . | 20 | 20811 | 20879 | 20695 | 20 | -59.1 | -56.1 | -61.2 | — | — |
| | 40 . . . | 15 | 22223 | 22295 | 22105 | 15 | -55.9 | -54.0 | -57.5 | — | — |
| | 30 . . . | 15 | 24064 | 24150 | 23958 | 15 | -53.3 | -50.2 | -56.5 | — | — |
| | 20 . . . | 9 | 26709 | 26815 | 26624 | 9 | -48.5 | -45.3 | -51.2 | — | — |
| | 10 . . . | 2 | 31276 | 31337 | 31215 | 2 | -44.5 | -43.3 | -45.2 | — | — |
| Aswan 0000 UT | Surface . . . | 30 | 986m.b. | 992m.b. | 982m.b. | 30 | 24.1 | 26.6 | 20.0 | 30 | 6.3 |
| | 1000 . . . | 30 | 71 | 123 | 36 | — | — | — | — | — | — |
| | 850 . . . | 30 | 1492 | 1544 | 1454 | 30 | 22.8 | 27.9 | 16.8 | 21 | -0.1 |
| | 700 . . . | 30 | 3150 | 3193 | 3104 | 30 | 11.8 | 15.5 | 8.1 | 20 | -6.9 |
| | 600 . . . | 30 | 4416 | 4467 | 4370 | 30 | 2.8 | 5.7 | -1.5 | 17 | -10.8 |
| | 500 . . . | 30 | 5869 | 5927 | 5817 | 30 | -5.8 | -1.9 | -8.8 | 5 | -22.9 |
| | 400 . . . | 30 | 7580 | 7623 | 7517 | 30 | -17.0 | -14.9 | -21.6 | 1 | -27.8 |
| | 300 . . . | 30 | 9679 | 9763 | 9600 | 30 | -32.2 | -29.4 | -35.2 | — | — |
| | 250 . . . | — | — | — | — | — | — | — | — | — | — |
| | 200 . . . | 29 | 12422 | 12531 | 12321 | 29 | -52.8 | -46.4 | -55.2 | — | — |
| | 150 . . . | 29 | 14224 | 14361 | 14115 | 29 | -65.8 | -62.6 | -70.0 | — | — |
| | 100 . . . | 24 | 16601 | 16768 | 16524 | 24 | -77.2 | -74.6 | -80.3 | — | — |
| | 70 . . . | 18 | 18667 | 18800 | 18440 | 18 | -68.9 | -65.4 | -73.0 | — | — |
| | 60 . . . | — | — | — | — | — | — | — | — | — | — |
| | 50 . . . | 14 | 20741 | 20855 | 20664 | 14 | -62.1 | -57.5 | -67.9 | — | — |
| | 40 . . . | — | — | — | — | — | — | — | — | — | — |
| | 30 . . . | 11 | 23964 | 24066 | 23864 | 11 | -54.1 | -52.4 | -55.6 | — | — |
| | 20 . . . | 8 | 26552 | 26712 | 26478 | 8 | -48.4 | -44.1 | -51.2 | — | — |
| | 10 . . . | — | — | — | — | — | — | — | — | — | — |

N = Number of cases the element has been observed during the month.

* The atmospheric pressure corrected to the elevation of the radiosonde station.

UPPER AIR CLIMATOLOGICAL DATA

Table B1 (contd.)—MONTHLY MEANS AND MONTHLY ABSOLUTE HIGHER & LOWER VALUES OF ALTITUDE, AIR TEMPERATURE & DEW POINT AT STANDARD AND SELECTED PRESSURE SURFACES.

SEPTEMBER — 1964

| Station | Pressure Surface (Millibar) | Altitude of Pressure Surface (gpm) | | | | Temperature (°C) | | | | Dew Point (°C) | |
|----------------------|-----------------------------|------------------------------------|----------|----------|----------|------------------|-------|---------|--------|----------------|-------|
| | | N | Mean | Highest | Lowest | N | Mean | Highest | Lowest | N | Mean |
| Marsa Matruh 1200 UT | Surface . . . | 30 | 1015m.b. | 1021m.b. | 1012m.b. | 30 | 25.3 | 27.0 | 23.5 | 30 | 18.4 |
| | 1000 . . . | 30 | 158 | 217 | 133 | 30 | 24.1 | 25.7 | 21.0 | 30 | 17.2 |
| | 850 . . . | 30 | 1555 | 1602 | 1531 | 30 | 15.0 | 20.4 | 9.3 | 22 | 2.3 |
| | 700 . . . | 30 | 3176 | 3228 | 3133 | 30 | 8.1 | 12.2 | 1.5 | 2 | -8.6 |
| | 600 . . . | 30 | 4432 | 4486 | 4379 | 30 | 1.5 | 6.2 | -3.2 | — | — |
| | 500 . . . | 30 | 5874 | 5926 | 5803 | 30 | -8.1 | -3.5 | -12.0 | — | — |
| | 400 . . . | 30 | 7571 | 7655 | 7473 | 30 | -19.7 | -14.2 | -23.7 | — | — |
| | 300 . . . | 30 | 9647 | 9772 | 9527 | 30 | -33.6 | -28.9 | -38.6 | — | — |
| | 250 . . . | — | — | — | — | — | — | — | — | — | — |
| | 200 . . . | 28 | 12386 | 12552 | 12235 | 28 | -51.9 | -49.3 | -54.4 | — | — |
| | 150 . . . | 28 | 14202 | 14384 | 14046 | 28 | -62.7 | -61.1 | -65.1 | — | — |
| | 100 . . . | 23 | 16552 | 16816 | 16505 | 23 | -70.0 | -67.0 | -77.5 | — | — |
| | 70 . . . | 19 | 18803 | 18970 | 18670 | 19 | -63.7 | -66.3 | -68.2 | — | — |
| | 60 . . . | — | — | — | — | — | — | — | — | — | — |
| | 50 . . . | 18 | 20919 | 21072 | 20780 | 18 | -55.7 | -52.0 | -59.5 | — | — |
| | 40 . . . | — | — | — | — | — | — | — | — | — | — |
| | 30 . . . | 13 | 24238 | 24415 | 24098 | 13 | -48.5 | -44.6 | -53.1 | — | — |
| | 20 . . . | 5 | 26917 | 27039 | 26826 | 5 | -44.6 | -41.9 | -48.4 | — | — |
| | 10 . . . | — | — | — | — | — | — | — | — | — | — |
| Helwan 1200 UT | Surface . . . | 30 | 995m.b. | 1002m.b. | 992m.b. | 30 | 30.4 | 34.6 | 27.2 | 30 | 11.9 |
| | 1000 . . . | 30 | 103 | 157 | 76 | 5 | 27.9 | 28.9 | 27.2 | 5 | 10.0 |
| | 850 . . . | 30 | 1513 | 1554 | 1486 | 30 | 16.7 | 24.2 | 11.6 | 27 | 4.7 |
| | 700 . . . | 30 | 3146 | 3215 | 3119 | 30 | 10.3 | 15.8 | 6.9 | 1 | -9.2 |
| | 600 . . . | 30 | 4413 | 4497 | 4375 | 30 | 3.8 | 9.6 | -1.9 | — | — |
| | 500 . . . | 30 | 5860 | 5924 | 5822 | 30 | -5.5 | -1.8 | -9.8 | — | — |
| | 400 . . . | 30 | 7582 | 7672 | 7522 | 30 | -17.7 | -12.8 | -21.0 | — | — |
| | 300 . . . | 30 | 9669 | 9776 | 9591 | 30 | -32.1 | -27.6 | -35.2 | — | — |
| | 250 . . . | — | — | — | — | — | — | — | — | — | — |
| | 200 . . . | 30 | 12418 | 12548 | 12298 | 30 | -51.7 | -49.0 | -56.0 | — | — |
| | 150 . . . | 30 | 14226 | 14378 | 14082 | 30 | -64.2 | -61.1 | -66.9 | — | — |
| | 100 . . . | 28 | 16632 | 16710 | 16489 | 28 | -74.0 | -69.2 | -78.4 | — | — |
| | 70 . . . | 26 | 18760 | 18910 | 18620 | 26 | -63.0 | -62.7 | -74.0 | — | — |
| | 60 . . . | 25 | 19705 | 19844 | 19553 | 25 | -61.6 | -58.9 | -65.4 | — | — |
| | 50 . . . | 25 | 20839 | 20991 | 20699 | 25 | -57.2 | -55.4 | -61.1 | — | — |
| | 40 . . . | 20 | 22276 | 22411 | 22135 | 20 | -54.1 | -51.4 | -59.2 | — | — |
| | 30 . . . | 17 | 24147 | 24277 | 24030 | 17 | -50.2 | -41.4 | -55.7 | — | — |
| | 20 . . . | 10 | 26800 | 26928 | 26689 | 10 | -47.9 | -46.2 | -52.3 | — | — |
| | 10 . . . | 1 | 31429 | — | — | 1 | -42.8 | — | — | — | — |
| Aswan 1200 UT | Surface . . . | 30 | 986m.b. | 992m.b. | 982m.b. | 30 | 36.5 | 40.4 | 33.0 | 30 | 7.1 |
| | 1000 . . . | 30 | 68 | 121 | 30 | — | — | — | — | — | — |
| | 850 . . . | 30 | 1510 | 1560 | 1479 | 30 | 23.2 | 31.9 | 18.2 | 23 | 0.9 |
| | 700 . . . | 30 | 3172 | 3226 | 3124 | 30 | 12.8 | 16.8 | 8.7 | 24 | -5.1 |
| | 600 . . . | 30 | 4443 | 4476 | 4387 | 30 | 3.4 | 9.6 | -1.8 | 16 | -12.2 |
| | 500 . . . | 30 | 5899 | 5998 | 5836 | 30 | -4.8 | -17.6 | -23.8 | 6 | -20.1 |
| | 400 . . . | 30 | 7620 | 7742 | 7533 | 30 | -15.7 | -11.3 | -18.8 | 1 | -38.1 |
| | 300 . . . | 30 | 9729 | 9885 | 9624 | 30 | -31.9 | -29.0 | -34.0 | 1 | -29.1 |
| | 250 . . . | — | — | — | — | — | — | — | — | — | — |
| | 200 . . . | 29 | 12490 | 12674 | 12380 | 29 | -51.4 | -46.7 | -54.2 | — | — |
| | 150 . . . | 28 | 14303 | 14516 | 14153 | 28 | -64.3 | -53.9 | -67.2 | — | — |
| | 100 . . . | 28 | 16703 | 16926 | 16522 | 28 | -75.0 | -71.0 | -78.2 | — | — |
| | 70 . . . | 26 | 18800 | 19050 | 18470 | 26 | -67.2 | -57.1 | -73.5 | — | — |
| | 60 . . . | — | — | — | — | — | — | — | — | — | — |
| | 50 . . . | 18 | 20885 | 21121 | 20689 | 18 | -57.2 | -50.0 | -60.8 | — | — |
| | 40 . . . | — | — | — | — | — | — | — | — | — | — |
| | 30 . . . | 12 | 24225 | 24450 | 24023 | 12 | -48.8 | -41.0 | -51.6 | — | — |
| | 20 . . . | 11 | 26934 | 27262 | 26674 | 11 | -42.7 | -32.0 | -47.5 | — | — |
| | 10 . . . | 5 | 31790 | 32135 | 31445 | 2 | -31.6 | -22.7 | -40.4 | — | — |

N = Number of cases the element has been observed during the month.

* The atmospheric pressure corrected to the elevation of the radiosonde station.

**Table B 2.—MEAN AND EXTREME VALUES OF THE FREEZING LEVEL AND THE TROPOPAUSE;
THE HIGHEST WIND SPEED IN THE UPPER AIR
SEPTEMBER — 1964**

| Station | | Freezing Level | | | | | | | | | First Tropopause | | | | | | | | | Highest wind speed | | | |
|---------|-----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|------------------|----------------|------------------|----------------|----------------|------------------|----------------|----------------|------------------|--------------------|----------------|----------------------|----------------|
| | | Mean | | | Highest | | | Lowest | | | Mean | | | Highest | | | Lowest | | | Altitude (gpm) | Pressure (mb.) | Direction (000—360)° | Speed in Knots |
| | | Altitude (gpm) | Pressure (mb.) | Dew point (°C) | Altitude (gpm) | Pressure (mb.) | Dew point (°C) | Altitude (gpm) | Pressure (mb.) | Dew point (°C) | Altitude (gpm) | Pressure (mb.) | Temperature (°C) | Altitude (gpm) | Pressure (mb.) | Temperature (°C) | Altitude (gpm) | Pressure (mb.) | Temperature (°C) | | | | |
| 0000 UT | | (N) | (N) | (N) | | | | | | | (N) | (N) | (N) | | | | | | | | | | |
| | Mersa Matruh(A) | 4488 (30) | 592 (30) | 0.0 (1) | 5080 | 554 | — | 2570 | 754 | — 1.0 | 15301 (24) | 119 (24) | —71.6 (24) | 16706 | 100 | —73.1 | 13690 | 158 | —65.2 | 8535 | 344 | 240 | 108 |
| | Helwan | 5017 (30) | 557 (30) | — — | 5530 | 524 | — | 4348 | 600 | — | 15908 (27) | 113 (27) | —72.9 (27) | 17430 | 83 | —77.0 | 14950 | 133 | —70.1 | 13270 | 175 | 230 | 108 |
| | Aswan . . . A) | 4886 (30) | 566 (30) | —12.1 (14) | 5500 | 525 | — | 4160 | 621 | —14.7 | 16085 (20) | 110 (20) | —77.3 (20) | 16717 | 100 | —78.6 | 14910 | 132 | —73.8 | 15300 | 121 | 210 | 84 |
| 1200 UT | | (N) | (N) | (N) | | | | | | | (N) | (N) | (N) | | | | | | | | | | |
| | Mersa Matruh(A) | 4634 (30) | 585 (30) | —13.4 (1) | 5300 | 540 | — | 3360 | 682 | —13.4 | 15786 (22) | 112 (22) | —69.9 (22) | 17230 | 92 | —80.5 | 14730 | 138 | —67.4 | 9835 | 285 | 270 | 114 |
| | Helwan | 5013 (30) | 555 (30) | — — | 5670 | 516 | — | 4397 | 600 | — | 16192 (27) | 108 (27) | —74.0 (27) | 17080 | 92 | —76.1 | 14710 | 136 | —69.0 | 15520 | 119 | 240 | 100 |
| | Aswan . . . (A) | 4999 (30) | 560 (30) | —13.4 (13) | 5740 | 517 | — | 4130 | 622 | —11.3 | 16046 (28) | 112 (28) | —74.9 (28) | 16926 | 100 | —76.3 | 15290 | 127 | —70.7 | 15030 | 132 | 130 | 67 |

N = The number of cases the element has been observed during the month.

Table B 3.—NUMBER OF OCCURRENCES OF WIND DIRECTION WITHIN SPECIFIED RANGES AND THE MEAN SCALAR WIND SPEED AT THE STANDARD AND SELECTED PRESSURE SURFACES

MERSA MATRUH (A)— SEPTEMBER 1964

| Time | Pressure Surface Millibar | Wind between specified ranges of direction (000—360)* | | | | | | | | | | | | | | | | | | Number of calm winds | Total number of observations (TN) | Mean scalar wind speed (knots) | | | | | | |
|-----------|------------------------------|---|-----------|-----|-----------|-----|-----------|-----|-----------|-----|-----------|-----|-----------|-----|-----------|-----|-----------|-----|-----------|-------------------------|--------------------------------------|-----------------------------------|-----------|------|-----------|------|-----------|------|
| | | 345 | | 015 | | 045 | | 075 | | 105 | | 135 | | 165 | | 195 | | 225 | | | | | 255 | | 285 | | 315 | |
| | | / | | / | | / | | / | | / | | / | | / | | / | | / | | | | | / | | / | | / | |
| | | 014 | 044 | 074 | 104 | 134 | 164 | 194 | 224 | 254 | 284 | 314 | 344 | N | (ff) | N | (ff) | N | (ff) | | | | N | (ff) | N | (ff) | N | (ff) |
| | | N | (ff) m | N | (ff) m | N | (ff) m | N | (ff) m | N | (ff) m | N | (ff) m | N | (ff) m | N | (ff) m | N | (ff) m | N | (ff) m | N | (ff) m | N | (ff) m | N | (ff) m | |
| 0000 U.T. | Surface | 8 | 10 | 1 | 4 | 1 | 3 | 0 | — | 1 | 8 | 0 | — | 0 | — | 0 | — | 1 | 8 | 4 | 6 | 2 | 10 | 8 | 12 | 4 | 30 | 8 |
| | 1000 | 8 | 11 | 1 | 4 | 1 | 4 | 0 | — | 1 | 10 | 0 | — | 0 | — | 0 | — | 1 | 8 | 3 | 8 | 6 | 12 | 6 | 10 | 2 | 29 | 9 |
| | 850 | 7 | 15 | 3 | 15 | 2 | 14 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 2 | 12 | 2 | 12 | 6 | 22 | 6 | 14 | 1 | 29 | 15 |
| | 700 | 5 | 15 | 1 | 6 | 0 | — | 2 | 12 | 0 | — | 0 | — | 0 | — | 0 | — | 1 | 21 | 8 | 26 | 6 | 13 | 6 | 13 | 0 | 29 | 17 |
| | 600 | 4 | 14 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 4 | 19 | 2 | 34 | 8 | 21 | 8 | 10 | 3 | 12 | 0 | 29 | 17 |
| | 500 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 2 | 19 | 5 | 35 | 17 | 25 | 3 | 20 | 2 | 14 | 0 | 29 | 25 |
| | 400 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 3 | 30 | 11 | 34 | 13 | 35 | 1 | 30 | 1 | 40 | 0 | 29 | 34 |
| | 300 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 3 | 30 | 15 | 38 | 9 | 37 | 2 | 30 | 0 | — | 0 | 29 | 34 |
| | 200 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 3 | 35 | 9 | 46 | 13 | 49 | 0 | — | 0 | — | 0 | 25 | 46 |
| | 150 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 3 | 39 | 9 | 44 | 9 | 41 | 1 | 13 | 0 | — | 0 | 22 | 41 |
| | 100 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 1 | 4 | 2 | 20 | 9 | 20 | 5 | 16 | 0 | — | 0 | — | 0 | 17 | 18 |
| | 70 | 0 | — | 0 | — | 1 | 5 | 2 | 5 | 1 | 5 | 1 | 15 | 0 | — | 2 | 7 | 3 | 8 | 3 | 9 | 0 | — | 0 | — | 0 | 13 | 8 |
| | 60 | 0 | — | 0 | — | 1 | 8 | 5 | 9 | 1 | 7 | 0 | — | 0 | — | 2 | 10 | 1 | 5 | 0 | — | 0 | — | 0 | — | 3 | 13 | 7 |
| | 50 | 0 | — | 0 | — | 4 | 13 | 7 | 11 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 2 | 13 | 10 |
| | 40 | 0 | — | 0 | — | 4 | 11 | 4 | 19 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | 8 | 15 |
| 30 | 0 | — | 0 | — | 3 | 27 | 3 | 8 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | 6 | 18 | |
| 20 | 0 | — | 1 | 15 | 1 | 25 | 2 | 28 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | 4 | 24 | |
| 10 | 0 | — | 0 | — | 0 | — | 1 | 11 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | 1 | 11 | |
| 1200 U.T. | Surface | 7 | 11 | 2 | 11 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 5 | 15 | 16 | 16 | 16 | 16 | 0 | 30 | 14 |
| | 1000 | 5 | 11 | 2 | 12 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 6 | 17 | 17 | 17 | 17 | 0 | 30 | 15 | |
| | 850 | 1 | 13 | 3 | 11 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 2 | 14 | 5 | 13 | 9 | 14 | 10 | 0 | 30 | 13 | |
| | 700 | 1 | 12 | 2 | 8 | 1 | 5 | 1 | 5 | 0 | — | 0 | — | 0 | — | 0 | — | 3 | 24 | 7 | 20 | 9 | 12 | 6 | 11 | 0 | 30 | 14 |
| | 600 | 0 | — | 2 | 14 | 0 | — | 0 | — | 0 | — | 1 | 5 | 1 | 8 | 1 | 11 | 6 | 27 | 10 | 17 | 6 | 14 | 3 | 14 | 0 | 30 | 17 |
| | 500 | 1 | 23 | 1 | 22 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 2 | 14 | 12 | 28 | 9 | 26 | 3 | 19 | 2 | 22 | 0 | 30 | 25 |
| | 400 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 3 | 29 | 11 | 41 | 13 | 33 | 1 | 28 | 2 | 38 | 0 | 30 | 36 |
| | 300 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 2 | 30 | 17 | 46 | 8 | 53 | 1 | 59 | 2 | 38 | 0 | 30 | 47 |
| | 200 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 3 | 40 | 12 | 52 | 8 | 50 | 1 | 43 | 1 | 38 | 0 | 25 | 49 |
| | 150 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 4 | 48 | 11 | 41 | 4 | 39 | 2 | 44 | 0 | — | 0 | 21 | 42 |
| | 100 | 0 | — | 0 | — | 0 | — | 1 | 8 | 1 | 17 | 1 | 16 | 1 | 7 | 3 | 24 | 8 | 33 | 3 | 25 | 1 | 25 | 0 | — | 0 | 19 | 26 |
| | 70 | 0 | — | 0 | — | 2 | 11 | 5 | 11 | 4 | 10 | 2 | 6 | 0 | — | 0 | — | 1 | 2 | 0 | — | 0 | — | 0 | — | 0 | 14 | 9 |
| | 60 | 0 | — | 0 | — | 1 | 15 | 8 | 7 | 1 | 10 | 0 | — | 0 | — | 1 | 3 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | 11 | 8 |
| | 50 | 0 | — | 1 | 21 | 0 | — | 6 | 13 | 2 | 12 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | 9 | 14 |
| | 40 | 0 | — | 0 | — | 1 | 8 | 3 | 11 | 2 | 14 | 1 | 11 | 0 | — | 0 | — | 1 | 9 | 0 | — | 0 | — | 0 | — | 0 | 8 | 11 |
| 30 | 0 | — | 0 | — | 1 | 13 | 2 | 6 | 2 | 18 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | 5 | 12 | |
| 20 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | |
| 10 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | |

N — The number of cases the wind has been observed from the range of direction during the month.
 TN — The total number of cases the wind has been observed for all directions during the month.

Table. B 3 (contd.)—NUMBER OF OCCURRENCES OF WIND DIRECTION WITHIN SPECIFIC RANGES AND THE MEAN SCALAR WIND SPEED AT THE STANDARD AND SELECTED PRESSURE SURFACES

HELWAN—SEPTEMBER 1964

| Time | Pressure Surface Millibar | Wind between specified ranges of direction (000—360)* | | | | | | | | | | | | | | | | | | | | | | | | Number of calm winds | Total number of observations (TN) | Mean scalar wind speed (knots) |
|--------------|------------------------------|---|-----------|-----------------|-----------|-----------------|-----------|-----------------|-----------|-----------------|-----------|-----------------|-----------|-----------------|-----------|-----------------|-----------|-----------------|-----------|-----------------|-----------|-----------------|-----------|-----------------|-----------|-------------------------|--------------------------------------|-----------------------------------|
| | | 345 / 014 | | 015 / 044 | | 045 / 074 | | 075 / 104 | | 105 / 134 | | 135 / 164 | | 165 / 194 | | 195 / 224 | | 225 / 254 | | 255 / 284 | | 285 / 314 | | 315 / 344 | | | | |
| | | N | (ff) m | N | (ff) m | N | (ff) m | N | (ff) m | N | (ff) m | N | (ff) m | N | (ff) m | N | (ff) m | N | (ff) m | N | (ff) m | N | (ff) m | N | (ff) m | | | |
| 0000 U.T. | Surface | 7 | 8 | 15 | 11 | 3 | 13 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 1 | 3 | 0 | — | 3 | 8 | 1 | 30 | 9 |
| | 1000 | 0 | — | 3 | 11 | 1 | 36 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | 4 | 17 |
| | 850 | 10 | 15 | 5 | 13 | 3 | 11 | 3 | 12 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 1 | 19 | 1 | 17 | 7 | 15 | 0 | 30 | 14 |
| | 700 | 1 | 14 | 1 | 10 | 1 | 5 | 0 | — | 2 | 5 | 0 | — | 0 | — | 1 | 11 | 3 | 6 | 6 | 13 | 10 | 10 | 5 | 7 | 0 | 30 | 9 |
| | 600 | — | 3 | 1 | 5 | 0 | — | 0 | — | 0 | — | 2 | 8 | 0 | — | 1 | 9 | 12 | 15 | 6 | 17 | 6 | 9 | 1 | 16 | 0 | 30 | 18 |
| | 500 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 4 | 28 | 11 | 17 | 11 | 18 | 1 | 15 | 3 | 21 | 0 | 30 | 19 |
| | 400 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 1 | 12 | 4 | 28 | 10 | 40 | 12 | 28 | 2 | 11 | 1 | 34 | 0 | 30 | 30 |
| | 300 | 1 | 3 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 3 | 17 | 3 | 52 | 18 | 38 | 3 | 36 | 2 | 22 | 0 | — | 0 | 30 | 35 |
| | 200 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 4 | 22 | 7 | 27 | 15 | 45 | 4 | 36 | 0 | — | 0 | — | 0 | 30 | 37 |
| | 150 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 2 | 30 | 2 | 50 | 8 | 32 | 12 | 47 | 4 | 40 | 0 | — | 0 | — | 0 | 28 | 41 |
| | 100 | 0 | — | 0 | — | 0 | — | 0 | — | 1 | 6 | 4 | 27 | 6 | 31 | 4 | 26 | 4 | 39 | 3 | 29 | 1 | 10 | 0 | — | 0 | 23 | 29 |
| | 70 | 0 | — | 0 | — | 3 | 19 | 3 | 53 | 0 | — | 4 | 14 | 2 | 18 | 0 | — | 1 | 12 | 3 | 14 | 0 | — | 0 | — | 2 | 18 | 20 |
| 60 | 0 | — | 0 | — | 3 | 20 | 4 | 13 | 1 | 3 | 0 | — | 1 | 14 | 0 | — | 2 | 22 | 1 | 11 | 0 | — | 0 | — | 0 | 12 | 15 | |
| 50 | 0 | — | 1 | 14 | 0 | — | 6 | 13 | 2 | 20 | 0 | — | 0 | — | 1 | 18 | 0 | — | 0 | — | 1 | 12 | 0 | — | 0 | 11 | 15 | |
| 40 | 0 | — | 0 | — | 1 | 3 | 3 | 9 | 1 | 20 | 1 | 18 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | 6 | 12 | |
| 30 | 0 | — | 0 | — | 0 | — | 2 | 20 | 1 | 36 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | 3 | 25 | |
| 20 | 0 | — | 0 | — | 0 | — | 1 | 20 | 0 | — | 0 | — | 1 | 16 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | 2 | 22 | |
| 10 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | |
| 1800 U.T. | Surface | 11 | 13 | 5 | 18 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 1 | 5 | 0 | — | 2 | 10 | 4 | 10 | 7 | 10 | 0 | 30 | 12 |
| | 1000 | 4 | 14 | 1 | 14 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | 5 | 14 |
| | 850 | 8 | 14 | 10 | 13 | 3 | 12 | 0 | — | 1 | 6 | 0 | — | 0 | — | 0 | — | 1 | 17 | 4 | 12 | 3 | 10 | 0 | — | 0 | 30 | 13 |
| | 700 | 4 | 9 | 0 | — | 0 | — | 2 | 4 | 1 | 15 | 0 | — | 1 | 3 | 2 | 6 | 7 | 16 | 8 | 11 | 0 | — | 5 | 9 | 0 | 30 | 10 |
| | 600 | 1 | 20 | 0 | — | 0 | — | 0 | — | 0 | — | 1 | 28 | 2 | 12 | 5 | 15 | 16 | 16 | 4 | 20 | 1 | 6 | 1 | 10 | 0 | 30 | 16 |
| | 500 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 1 | 4 | 1 | 11 | 2 | 30 | 16 | 19 | 8 | 22 | 0 | — | 2 | 16 | 0 | 30 | 20 |
| | 400 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 2 | 8 | 2 | 14 | 16 | 35 | 8 | 29 | 2 | 25 | 0 | — | 0 | 30 | 29 |
| | 300 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 2 | 8 | 3 | 40 | 18 | 39 | 5 | 38 | 1 | 6 | 0 | — | 1 | 30 | 34 |
| | 200 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 4 | 30 | 4 | 34 | 19 | 42 | 3 | 44 | 0 | — | 0 | — | 0 | 30 | 40 |
| | 150 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 1 | 50 | 6 | 29 | 9 | 36 | 12 | 43 | 2 | 35 | 0 | — | 0 | — | 0 | 30 | 38 |
| | 100 | 0 | — | 0 | — | 1 | 88 | 0 | — | 3 | 28 | 4 | 22 | 4 | 22 | 2 | 19 | 5 | 22 | 3 | 19 | 1 | 23 | 0 | — | 0 | 23 | 25 |
| | 70 | 0 | — | 0 | — | 1 | 21 | 4 | 15 | 4 | 20 | 5 | 19 | 3 | 15 | 1 | 45 | 0 | — | 0 | — | 0 | — | 0 | — | 1 | 19 | 18 |
| 60 | 0 | — | 0 | — | 1 | 19 | 4 | 16 | 4 | 18 | 4 | 20 | 2 | 22 | 1 | 21 | 1 | 51 | 0 | — | 0 | — | 0 | — | 1 | 18 | 20 | |
| 50 | 0 | — | 0 | — | 1 | 4 | 5 | 19 | 4 | 20 | 2 | 24 | 1 | 25 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | 13 | 19 | |
| 40 | 0 | — | 0 | — | 0 | — | 2 | 22 | 7 | 20 | 2 | 16 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | 11 | 20 | |
| 30 | 0 | — | 0 | — | 0 | — | 4 | 16 | 2 | 18 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | 6 | 17 | |
| 20 | 0 | — | 1 | 30 | 0 | — | 0 | — | 1 | 28 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | 2 | 29 | |
| 10 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | | |

N = The number of cases the wind has been observed from the range of direction during the month.

TN = The total number of cases the wind has been observed for all directions during the month.

Table B 3 (contd.)—NUMBER OF OCCURRENCES OF WIND DIRECTION WITHIN SPECIFIED RANGES AND THE MEAN SCALAR WIND SPEED AT THE STANDARD AND SELECTED PRESSURE SURFACES.

ASWAN (A) — SEPTEMBER 1964

| Time | Pressure Surface Millibar | Wind between specified ranges of direction (000—360)* | | | | | | | | | | | | | | | | Number of calm winds | Total number of observations (TN) | Mean scalar wind speed (knots) | | | | | | | | |
|--------------|------------------------------|---|------|-----|------|-----|------|-----|------|-----|------|-----|------|---|------|----|------|-------------------------|--------------------------------------|-----------------------------------|------|---|----|----|----|----|----|----|
| | | 345 | 015 | 045 | 075 | 105 | 135 | 165 | 195 | 225 | 255 | 285 | 315 | | | | | | | | | | | | | | | |
| | | / | / | / | / | / | / | / | / | / | / | / | / | | | | | | | | | | | | | | | |
| | | 014 | 044 | 074 | 104 | 134 | 164 | 194 | 224 | 254 | 284 | 314 | 344 | | | | | | | | | | | | | | | |
| | | N | (ff) | N | (ff) | N | (ff) | N | (ff) | N | (ff) | N | (ff) | N | (ff) | N | (ff) | N | (ff) | N | (ff) | | | | | | | |
| | | m | m | m | m | m | m | m | m | m | m | m | m | m | m | m | m | m | m | m | m | | | | | | | |
| 0000 U. T. | Surface | 20 | 13 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 1 | 5 | 9 | 13 | 0 | 30 | 13 | | | | |
| | 1000 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | | | | |
| | 850 | 5 | 10 | 2 | 12 | 2 | 10 | 1 | 9 | 2 | 5 | 5 | 0 | — | 0 | — | 8 | 3 | 1 | 12 | 1 | 3 | 0 | 30 | 8 | | | |
| | 700 | 0 | — | 0 | — | 0 | — | 1 | 5 | 0 | — | 0 | — | 3 | 12 | 7 | 13 | 11 | 14 | 7 | 12 | 1 | 6 | 0 | 0 | 30 | 13 | |
| | 600 | 0 | — | 0 | — | 1 | 5 | 1 | 2 | 0 | — | 2 | 14 | 2 | 14 | 8 | 18 | 10 | 14 | 3 | 17 | 2 | 6 | 0 | — | 1 | 30 | 12 |
| | 500 | 3 | 4 | 0 | — | 1 | 28 | 2 | 8 | 3 | 9 | 3 | 6 | 4 | 10 | 4 | 7 | 4 | 8 | 2 | 7 | 1 | 8 | 2 | 7 | 1 | 30 | 8 |
| | 400 | 2 | 8 | 0 | — | 4 | 13 | 4 | 5 | 1 | 6 | 1 | 4 | 3 | 6 | 3 | 15 | 5 | 8 | 1 | 6 | 1 | 7 | 4 | 7 | 1 | 30 | 8 |
| | 300 | 0 | — | 0 | — | 4 | 8 | 2 | 5 | 3 | 13 | 4 | 13 | 1 | 6 | 6 | 14 | 5 | 11 | 3 | 6 | 0 | — | 0 | — | 2 | 30 | 10 |
| | 200 | 0 | — | 0 | — | 0 | — | 3 | 15 | 4 | 24 | 7 | 14 | 7 | 17 | 7 | 21 | 0 | — | 0 | — | 0 | — | 0 | — | 1 | 29 | 17 |
| | 150 | 0 | — | 0 | — | 0 | — | 1 | 19 | 8 | 31 | 4 | 17 | 9 | 21 | 3 | 20 | 1 | 16 | 0 | — | 0 | — | 0 | — | 0 | 26 | 24 |
| | 100 | 0 | — | 0 | — | 0 | — | 1 | 15 | 7 | 27 | 5 | 21 | 1 | 15 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | 14 | 23 |
| | 70 | 0 | — | 0 | — | 2 | 22 | 1 | 14 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | 3 | 19 |
| | 60 | 0 | — | 0 | — | 0 | — | 1 | 24 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | 1 | 24 |
| | 50 | 0 | — | 0 | — | 0 | — | 1 | 13 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | 1 | 13 |
| 1200 U. T. | Surface | 23 | 11 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 2 | 8 | 5 | 13 | 0 | 30 | 11 | | | | |
| | 1000 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| | 850 | 1 | 10 | 1 | 8 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 3 | 6 | 4 | 11 | 14 | 11 | 7 | 11 | 0 | 30 | 10 | | |
| | 700 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 1 | 13 | 13 | 17 | 11 | 19 | 3 | 18 | 1 | 13 | 1 | 3 | 0 | 30 | 17 |
| | 600 | 1 | 1 | 0 | — | 0 | — | 0 | — | 0 | — | 3 | 10 | 4 | 16 | 14 | 11 | 5 | 15 | 1 | 7 | 1 | 6 | 0 | — | 1 | 30 | 11 |
| | 500 | 0 | — | 0 | — | 1 | 10 | 4 | 8 | 3 | 8 | 0 | — | 9 | 14 | 4 | 14 | 4 | 8 | 2 | 4 | 2 | 8 | 0 | — | 1 | 30 | 10 |
| | 400 | 4 | 5 | 0 | — | 3 | 9 | 2 | 7 | 5 | 6 | 2 | 13 | 6 | 14 | 1 | 7 | 1 | 9 | 2 | 12 | 1 | 7 | 2 | 4 | 1 | 30 | 8 |
| | 300 | 0 | — | 0 | — | 3 | 13 | 2 | 8 | 4 | 12 | 4 | 8 | 6 | 13 | 6 | 13 | 4 | 9 | 0 | — | 0 | — | 0 | — | 1 | 30 | 11 |
| | 200 | 0 | — | 0 | — | 1 | 12 | 2 | 22 | 4 | 16 | 7 | 17 | 8 | 15 | 4 | 18 | 2 | 8 | 0 | — | 0 | — | 0 | — | 0 | 28 | 16 |
| | 150 | 0 | — | 0 | — | 1 | 12 | 1 | 11 | 7 | 31 | 8 | 21 | 8 | 19 | 2 | 11 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | 27 | 22 |
| | 100 | 0 | — | 0 | — | 9 | — | 5 | 32 | 9 | 30 | 4 | 26 | 5 | 14 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | 23 | 26 |
| | 70 | 0 | — | 0 | — | 3 | 29 | 4 | 10 | 2 | 22 | 1 | 38 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | 10 | 21 |
| | 60 | 0 | — | 0 | — | 0 | — | 4 | 20 | 1 | 26 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | 5 | 21 |
| | 50 | 0 | — | 0 | — | 0 | — | 2 | 32 | 2 | 29 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | 4 | 31 |
| 40 | 0 | — | 0 | — | 1 | 9 | 0 | — | 1 | 22 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | 2 | 16 | |
| 30 | 0 | — | 0 | — | 0 | — | 1 | 26 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | 1 | 26 | |
| 20 | 0 | — | 0 | — | 0 | — | 1 | 36 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | 1 | 36 | |

N. — The number of cases the wind has been observed from the range of direction during the month.

T.N. — The total number of cases the wind has been observed for all directions during the month.

REVIEW OF AGRO-METEOROLOGICAL STATIONS

EL-KASR — SEPTEMBER 1964

Rather cool and dry

A minor heat wave started on the 3 rd. gave the highest values of the daily mean of air temperature (1.8°C above normal) and the night-time mean on that day while those of the minimum air temperature at 5 cms and 2 metres (2°C above normal), above the ground surface occurred on the following day and that of the total and sky radiation on the 5 th.

The highest values of the vapour pressure, daytime mean of air temperature and value of the daily mean were associated with a very minor heat wave on the 9 th., while those of evaporation from Pan class A and Piche in the free air at 1, 60 and 120 cms above the ground and in the screen (2.0 mms above normal) were recorded on the 11 th. together with the highest daytime mean of wind speed at 2 metres.

A cold spell followed with the peak on the 14 th. when the absolute minimum air temperature at 2 metres (6.0°C below normal) and the lowest daily means of wind speed at the levels 0.5, 1, 2 and 3 metres were recorded.

Another cold spell started on the 19 th. and gave the highest relative humidity (22% above normal) and the lowest vapour pressure deficit on the following day whereas the lowest values of evaporation from Pan class A and Piche in the free air and in the screen (3.6 mms below normal) and of night-time mean of wind speed, were reported on the next day.

The absolute minimum air temperature at 5 cms above the ground surface, another value for that at 2 metres and the lowest night-time mean, were absolute observed on the 26 th. together with the lowest soil temperature for the surface layers down to 10 cms of depth.

The most pronounced heat wave had its peak on the 27 th., when the absolute maximum air temperature (2.5°C above normal) and the highest water vapour pressure deficit occurred.

Towards the end of the month, a cool spell prevailed and gave the lowest means of air temperature for the day (2.2°C below normal) and daytime on the 23 rd. while the lowest values of the maximum air temperature (1.7°C below normal) and soil temperature for the layer 50 to 200 cms were recorded.

The mean air temperature and the relative humidity were less than the normal by 0.9°C and 3% while the Piche evaporation in the screen was more by 2.0 mms.

TAHRIR . . . SEPTEMBER 1964

Generally mild, foggy the second half of the month

This month was generally mild, rather foggy or misty most of its second part. One case of sandrising on the 11 th. No remarkable frontal passage occurred ; the biggest temperature change being a drop in the daily maximum of five degrees between the 22nd. and the 23rd.

Comparing with last September, this month is cooler and drier ; the differences in mean air temperatures, relative humidity and vapour pressure being -1.7°C , -5%, -1.9

mms respectively, with no rain occurring in both. Mean wind speed at 2 metres was the same in both months ; Piche evaporation was less by 0.6 mm in the mean, while both global radiation and actual sunshine duration were more by 46 langleys (in the mean) and 16.0 hours (in total) respectively.

Maximum and minimum soil temperature extremes down to 1 mm were exclusively less than last year by 0.3 to 1.9°C for the maxima, and 1.4 to 3.4°C for the minima.

GIZA — SEPTEMBER 1964

Normal relative humidity successive minor cool spells and heat waves.

The month started with a cool spell having the peak on the 6 th., when the lowest values of Piche evaporation in the free air at levels 1, 60 and 120 cms above the ground and in the screen (1.1 mms above normal) were recorded together with the lowest range of temperature and sunshine duration.

A minor heat wave followed and gave on the 7 th. the absolute maximum air temperature (1.8°C above normal) and the highest values of, the daily mean, daytime mean vapour pressure mean. vapour pressure deficit and the soil temperature for the layer 2 to 20 cms in the dry field and 1 to 2 cms in the wet field. On the following day, the highest values of minimum air temperature at 2 metres (3.2°C above normal) and at 5 cms above the wet and grass fields and also that of night-time were reported as well as the soil temperatures for the layers 1, to 20 cms in the dry field, 2 - 20 cms in the wet field, 03 to 10 cms in the grass field.

Another minor heat wave started on the 15 th. with the lowest relative humidity (36 % below normal) occurring on that day, and the highest values of, Piche evaporation in the free air and in the screen (5.1 mms above normal) and vapour pressure deficit on the next day whereas those of the daily mean relative humidity (5% above normal) and the minimum air temperature at 5 cms above dry soil were observed on the 17 th.

A prolonged cool spell prevailed during the last week and gave the lowest daily mean relative humidity (10% below normal) on the 24 th., the lowest vapour pressure and the absolute minimum air temperature at 2 metres (3.8°C below normal) on the next day while those at 3 cms above the dry, wet and grass soils took place on the 27 th. On the last day of the month, the lowest values of maximum air temperature (3.9°C below normal), the daily mean (3.2°C below normal) the daytime mean, the night-time mean, water vap. deficit and the total sun and sky radiation, were all recorded.

Compared with last year, the absolute minimum air temperature at 5 cms were lower by 0.1 and 0.5°C above the dry and wet fields respectively where that above the grass field was higher by 0.4°C.

The extreme soil temperatures at the different depths were generally lower by variable amounts in the free fields not more than 4.9°C.

The means of the surface wind speed at 2 metres were higher by 0.4, 0.5 and 0.3 m/sec. for the day, night-time and daytime respectively. Also the total (solar and sky radiation,) the total actual duration of bright sunshine, the mean Pan Class A evaporation of the day and the total potential evaporation were more by 851 gm.cal/cm², 10.1 hours, 0.18 and 13.2 mms while the daily mean of Piche evaporation in the screen and the total potential evapotranspiration for grass (Libia) were lower by 0.8 and 3.3 mms. respectively.

The daily mean of air temperature was 0.6°C below normal and that of Piche evaporation in the screen was higher by 7.1 mms. while the daily mean relative humidity was about normal.

KHARGA — SEPTEMBER 1964

Rather cool and dry

The month started with a cool spell, having the peak on the 6 th., when the highest values of the relative humidity (25% above normal) and the daily mean were recorded, while that of water vapour pressure was observed on the next day as well as the lowest values of vapour pressure deficit, evaporation from Pan class A and Piche both in the free air at levels 1, 60 and 120 cms above the ground surface and the screen (0.1 mm below normal), and surface wind speeds at the levels 50, 100 and 200 cms.

A minor heat wave started on the 15 th. and gave the absolute maximum air temperature (1.6°C above normal) on the following day together with the highest values of water vapour pressure deficit (39.4 mms) and the soil temperature at 2 cms of depth.

A cold spell then followed, giving in the 20 th. the absolute minimum air temperature at 5, 20 and 200 cms (5.1°C below normal) above the ground as well as the lowest night-time mean and also those of soil temperature for the surface layer down to 2 cms of depth.

Another minor heat wave had the peak on the 21 st. when the highest values of Pan class A and Piche evaporation in the free air and the screen (17.0 mms above normal) were reported as well as the lowest relative humidity (24% below normal) and the daily mean while the highest values of minimum air temperature at 5, 20 and 200 cms (2.4°C above normal) occurred on the next day together with those of the day, night-time and daytime.

A cool spell prevailed during the last week of the month and gave the highest values of mean surface wind speeds at the different levels on the 25 th. and the lowest values of vapour pressure on the 29 th., of maximum air temperature (5.4°C below normal) and daytime mean in the last day of the month.

With respect to air temperature, the maximum, minimum and daily mean were lower than the normal by 2.0, 1.2 and 1.0°C respectively. Also the daily mean of the relative humidity was 7% below normal while the Piche evaporation in the screen was higher by 9.0 mms.

**Table C 1.—AIR TEMPERATURE AT 2 METRES ABOVE GROUND
SEPTEMBER — 1964**

| STATION | Air Temperature (°C) | | | | | Mean Duration in hours of daily air temperature above the following values | | | | | | | | | | |
|-----------------|----------------------|--------------|-----------------------|-----------------------|---------------------|---|------|------|------|------|------|------|------|------|------|------|
| | Mean Max. | Mean Min. | Mean of the day | Night time mean | Day time mean | -5°C | 0°C | 5°C | 10°C | 15°C | 20°C | 25°C | 30°C | 35°C | 40°C | 45°C |
| El Kaer | 27.9 | 18.7 | 23.6 | 22.0 | 25.2 | 24.0 | 24.0 | 24.0 | 24.0 | 24.0 | 20.5 | 8.0 | 0.2 | 0.0 | 0.0 | 0.0 |
| Tahrir | 31.6 | 18.1 | 24.1 | 21.2 | 26.9 | 24.0 | 24.0 | 24.0 | 24.0 | 24.0 | 18.9 | 10.0 | 3.1 | 0.0 | 0.0 | 0.0 |
| Giza | 31.7 | 18.3 | 24.6 | 22.1 | 26.9 | 24.0 | 24.0 | 24.0 | 24.0 | 24.0 | 20.4 | 10.8 | 3.0 | 0.0 | 0.0 | 0.0 |
| Kharga | 34.6 | 20.0 | 27.8 | 25.6 | 30.0 | 24.0 | 24.0 | 24.0 | 24.0 | 24.0 | 23.3 | 15.8 | 8.4 | 1.1 | 0.0 | 0.0 |

**Table C 2.—ABSOLUTE VALUES OF AIR TEMPERATURE AT 2 METRES ABOVE GROUND,
ABSOLUTE MINIMUM AIR TEMPERATURE AT 5cms ABOVE GROUND OVER DIFFERENT FIELDS
SEPTEMBER — 1964**

| STATION | Max. Temp. at 2 metres | | | | Min. Temp. at 2 metres | | | | Min. Temp. at 5 cms. above | | | |
|-----------------|------------------------|------|--------|------|------------------------|------|--------|------|----------------------------|------|-------|------|
| | Highest | | Lowest | | Highest | | Lowest | | Dry Soil | | Grass | |
| | Value | Date | Value | Date | Value | Date | Value | Date | Value | Date | Value | Date |
| El Kaer | 30.8 | 27 | 25.6 | 30 | 22.4 | 4 | 14.4 | 14 | 12.4 | 26 | — | — |
| Tahrir | 34.6 | 16 | 27.9 | 30 | 21.7 | 7 | 14.3 | 27 | 11.7 | 27 | — | — |
| Giza | 34.2 | 7 | 34.5 | 30 | 21.6 | 8 | 14.6 | 25 | 9.5 | 27 | 8.7 | 2.7 |
| Kharga | 38.2 | 16 | 31.2 | 30 | 23.6 | 22 | 16.2 | 20 | 14.4 | 20 | — | — |

**Table C 3.—(SOLAR + SKY) RADIATION, DURATION OF BRIGHT SUNSHINE, RELATIVE HUMIDITY
& VAPOUR PRESSURE AT 2 METRES ABOVE GROUND, EVAPORATION & RAINFALL
SEPTEMBER — 1964**

| STATION | Solar+Sky Radiation gm. cal/cm² | Duration of Bright Sunshine (hours) | | | Relative Humidity % | | | | | | Vapour Pressure (mms) | | | | | | Evapora- tion(mms) | | Rainfall (mms) | | | |
|----------|------------------------------------|--|---------------------------|----|----------------------|--------------|-------------|-----------|--------|------|-----------------------|------------|---------|------|--------|------|-----------------------|---------------|-------------------------|-------------------------|------|------|
| | | Total Actual | Total Possible monthly | % | Duration in hours | | Mean of day | 1200 U.T. | Lowest | Date | Mean of day | 1200 UT | Highest | Date | Lowest | Date | Piche | Pan class (A) | Total Amount monthly | Max. fall in one day | Date | Date |
| | | | | | > 90 % | > 80 % | | | | | | | | | | | | | | | | |
| El Kaer. | 463.6 | 332.8 | 370.6 | 90 | — | — | 71 | 61 | 29 | 27 | 15.6 | 15.7 | | 9 | 9.3 | 23 | 13.6 | 9.56 | Tr. | Tr. | 23. | 23. |
| Tahrir . | 614.3 | 324.7 | 370.2 | 88 | 3.5 | 8.1 | 67 | 37 | 24 | 16 | 14.4 | 12.3 | | 7 | 9.5 | 28 | 12.9 | 9.36 | 0.0 | — | — | — |
| Giza . . | 508.9 | 315.7 | 370.2 | 85 | 1.8 | 6.2 | 63 | 39 | 27 | 15 | 14.0 | 12.8 | | 7 | 8.8 | 25 | 13.1 | 9.17 | 0.0 | — | — | — |
| Kharga . | 539.9 | 345.3 | 368.6 | 94 | 0 | 0 | 34 | 22 | 15 | 21 | 9.0 | 8.5 | | 7 | 5.5 | 29 | 33.7 | 17.61 | 0.0 | 0.0 | — | — |

**PRINTED IN U.A.R. BY
THE GENERAL ORGANIZATION
FOR GOVT. PRINTING OFFICES. CAIRO
ALY SULTAN ALY
UNDER-SECRETARY OF STATE
*Chairman of the Board of Directors***



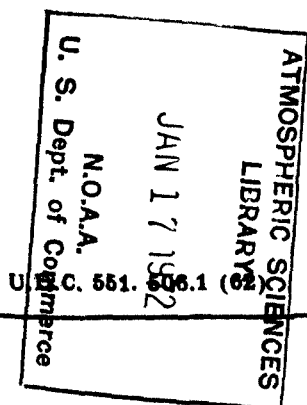
THE ARAB REPUBLIC OF EGYPT

MONTHLY WEATHER REPORT

VOLUME 7

NUMBER 10

OCTOBER, 1964



METEOROLOGICAL DEPARTMENT
CAIRO

PUBLICATIONS OF THE METEOROLOGICAL DEPARTMENT OF THE ARAB REPUBLIC OF EGYPT -- CAIRO

In fulfilment of its duties, the Meteorological Department of Egypt issues several reports and publications on weather, climate and agrometeorology. The principal publications are described on this page.

Orders for publications should be addressed to :
"The Director General, Meteorological Department, Kubri-el-Qubbeh — CAIRO".

THE DAILY WEATHER REPORT

This report is issued daily by the Meteorological Department since the year 1901. It includes surface and upper air observations carried out by the relevant networks of the Republic at the principal hours of observations.

As from January 1968 this report was revised to include a condensed representative selection of surface and upper air observations besides the 1200 U.T. surface & 500 mb charts.

THE MONTHLY WEATHER REPORT

First issued in 1909, the Monthly Weather Report served to give a brief summary of the weather conditions that prevailed over Egypt during the month, with a table showing the mean values for few meteorological elements and their deviations from the normal values. From 1954 to 1957 this report was in a rapid state of development and extension resulting into a voluminous report on January 1958 giving surface, upper air, and agro-meteorological data for Egypt.

As from January 1964, the Monthly Weather Report was pressed to give climatological data for a representative selection of synoptic stations.

THE AGRO-METEOROLOGICAL ABRIDGED MONTHLY REPORT

Gives a review of weather experienced in the agro-meteorological stations of Egypt as well as monthly values of certain elements.

THE ANNUAL REPORT

This report gives annual values and statistics for the various meteorological elements, together with a summary of the weather conditions that prevailed during all months of the year.

CLIMATOLOGICAL NORMALS FOR EGYPT

A voluminous edition was issued in march 1968 which brings normals and mean values up till 1960.

METEOROLOGICAL RESEARCH BULLETIN

First issued in January 1969 on a bi-annual basis. It includes research works carried out by members of staff of "The Meteorological Institute for Research and Training" and the Operational Divisions of Meteorological Department.

TECHNICAL NOTES

As from October 1970, the Meteorological Department started to issue a new series of publications in the form of Technical Notes (non periodical) on subjects related to studies and applications of meteorology in different fields for the benefit of personnel working in these fields.

The first Technical Note I was issued in October 1970 on : Sandstorms & Duststorms in Egypt.



THE ARAB REPUBLIC OF EGYPT

MONTHLY WEATHER REPORT

VOLUME 7

NUMBER 10

OCTOBER, 1964

U.D.C. 551.506.1 (62)

**METEOROLOGICAL DEPARTMENT
CAIRO**

CONTENTS

| | PAGES |
|---|-------|
| General Summary of Weather Conditions | 1-2 |

SURFACE DATA

| | |
|--|-----|
| Table A1.—Monthly values of the Atmospheric Pressure, Air Temperature, Relative Humidity, Bright Sunshine Duration and Piche Evaporation | 3 |
| „ A2.—Maximum and Minimum Air Temperatures | 4 |
| „ A3.—Sky Cover and Rainfall | 5 |
| „ A4.—Number of Days of Occurrence of Miscellaneous Weather Phenomena | 6 |
| „ A5.—Number in Hours of Occurrences of Concurrent Surface Wind Speed and Direction Recorded Within Specified Ranges | 7,8 |

UPPER AIR DATA

| | |
|--|-------|
| Table B1.—Monthly Means and Monthly Absolute Higher & Lower Values of Altitude, air Temperature & Dew point at Standard and Selected Pressure Surfaces | 9,10 |
| „ B2.—Mean and Extreme values of The Freezing Level and The Tropopause; The Highest Wind Speed in The Upper Air | 11 |
| „ B3.—Number of Occurrences of Wind Direction Within Specified Ranges and The Mean Scalar Wind Speed at the Standard and Selected Pressure Surfaces | 12-14 |

AGRO-METEOROLOGICAL DATA

| | |
|--|-------|
| Reviews of Agro-meteorological stations | 15-17 |
| Table C1.—Air Temperature at 2 Metres Above Ground | 18 |
| „ C2.—Absolute Values, of Air Temperature at 2 Metres Above Ground, Absolute Minimum Air Temperature at 5 Cms Above Ground Over Different Fields | 18 |
| „ C3.—(Solar + Sky) Radiation, Duration of Bright Sunshine, Relative Humidity and Vapour Pressure at 2 Metres Above Ground, Evaporation and Rainfall | 18 |
| „ C4.—Extreme Soil Temperature at Different Depths in Different Fields | 19 |
| „ C5.—Surface wind | 19 |

GENERAL SUMMARY OF WEATHER CONDITIONS

OCTOBER 1964

Rather mild and rainless in general in the northern and middle parts, hot and dry in the southern parts. Frequent early morning mist over Delta, Canal and Cairo areas.

GENERAL DESCRIPTION OF WEATHER

The prevailing weather was generally rather mild and almost rainless in the northern and middle parts, humid in particular in the Mediterranean coastal strip most of the month. Over the southern parts weather was generally hot & dry particularly between the 7th & 25th.

Light local showers fell over Alexandria area on the 3rd. Frequent early morning mist & fog developed over scattered parts of the Delta, Canal & Cairo areas during the last two thirds of the month.

PRESSURE DISTRIBUTION

The prevailing pressure distribution over the surface map this month can be summarized in the following pressure systems.

- Two Anticyclones over southwest Russia and western Europe respectively.
- The travelling Atlantic depressions through Europe and Russia along their preferred eastward and northeastward tracks.
- The secondary depressions over the Mediterranean and its northern vicinities.
- Troughs of low pressure over the Arabian Gulf and the great Sahara of Africa.

On the other hand the upper pressure systems at the 700 & 500 mb levels were confined in the two deep upper lows over north Atlantic and north Russia, their extended troughs through northern vicinities of the Mediterranean, together with the subtropical high pressure belt skirting latitude 35°N.

During this month secondary depressions over the Mediterranean and northern vicinities followed rather northeastward tracks through Central Mediterranean and Asia Minor. Two of these depressions developed over western Mediterranean on the 11th & 23rd and traversed Asia Minor round the 15th, 27th respectively. The other two depressions developed over Italy and Central Mediterranean round the 17th & 21st and traversed Asia Minor round the 21st, 23rd respectively.

Accordingly the barometric pressure over Egypt in particular and East Mediterranean in general experienced four oscillations but was above normal in general.

In the upper tropospheric charts the Subtropical jet stream was evident over Egypt during the month round 170 mb level.

The highest wind speeds recorded at Mersa Matruh, Helwan & Aswan were 149, 116 & 80 Knots on the 2nd, 24th & 28th respectively.

SURFACE WIND

The prevailing winds were light/moderate Nly in general, but became fresh/strong occasionally over scattered localities, particularly over Red Sea district.

No gales were reported during this month.

TEMPERATURE

Maximum air temperature was slightly subnormal the first week, and abnormally high and oscillatory otherwise.

The absolute maximum air temperature for the Republic was 39.8°C reported at Kharga on the 17th.

Cairo, August 1971

Minimum air temperature oscillated round normal in the northern and middle parts and was subnormal in the southern parts

The absolute minimum temperature of the Republic was 8.2°C reported at Dakhla on the 30th.

PRECIPITATION

This month was abnormally rainless apart from light showers over Alexandria area on the 3rd.

The absolute daily rainfall was 1.2 mms reported at Dekheila on the 3rd, which was at the same time the absolute monthly rainfall for the month.

M. F. TAHA

Under Secretary of State

Director General

Meteorological Department

**Table A 1. — MONTHLY VALUES OF THE ATMOSPHERIC PRESSURE, AIR TEMPERATURE,
RELATIVE HUMIDITY, BRIGHT SUNSHINE DURATION & PICHE EVAPORATION.**

OCTOBER — 1964

| STATION | Atmospheric Pressure (mbs) M.S.L. | | Air Temperature °C | | | | | | | | Relative Humidity % | | Bright Sunshine Duration (Hours) | | | Piche Evaporation (mm) Mean | |
|---------------------|--------------------------------------|---------------------------|--------------------|---------------------------|-------------|---------------------------|----------|----------|---------------------------|----------|---------------------------|------|----------------------------------|-----------------|-------------------|--------------------------------|------|
| | Mean | D.F. Normal or Average | Maximum | | Minimum | | A+B 2 | Dry Bulb | | Wet Bulb | | Mean | D.F. Normal or Average | Total Actual | Total Possible | | % |
| | | | (A) Mean | D.F. Normal or Average | (B) Mean | D.F. Normal or Average | | Mean | D.F. Normal or Average | Mean | D.F. Normal or Average | | | | | | |
| Sallum | 1017.7 | + 1.7 | 28.9 | + 1.3 | 19.2 | + 0.6 | 24.0 | 23.5 | + 0.9 | 18.4 | + 0.3 | 59 | — 4 | — | — | — | 8.4 |
| Mersa Matruh . (A) | 1017.9 | + 1.5 | 27.6 | + 0.6 | 16.6 | — 0.3 | 22.0 | 21.7 | — 0.1 | 17.7 | — 0.2 | 66 | 0 | 290.3 | 353.6 | 82.1 | 7.3 |
| Alexandria . . (A) | 1017.1 | + 1.2 | 28.4 | + 0.7 | 15.9 | — 1.9 | 22.2 | 22.0 | — 0.8 | 18.6 | — 0.2 | 71 | + 3 | 303.4 | 354.2 | 85.7 | 5.8 |
| Port Said . . . (A) | 1016.4 | + 1.3 | 26.6 | — 0.8 | 21.9 | + 0.1 | 24.2 | 24.0 | — 0.2 | 20.7 | + 0.5 | 73 | + 4 | 312.3 | 354.2 | 88.2 | 5.3 |
| El Arish | 1016.3 | + 1.3 | 27.6 | — 1.0 | 16.6 | — 1.3 | 22.1 | 22.4 | — 0.9 | 19.6 | — 0.5 | 76 | + 3 | 297.1 | 352.7 | 84.2 | 4.8 |
| Ghazza | 1015.9 | + 1.0 | 25.8 | — 1.1 | 16.1 | — 1.8 | 21.0 | 21.8 | — 1.0 | 19.1 | — 0.9 | 76 | — 1 | 287.1 | 353.6 | 81.2 | 5.2 |
| Tanta (A) | 1016.1 | — | 30.5 | — | 15.3 | — | 22.9 | 21.8 | — | 17.8 | — | 66 | — | 294.8 | 354.5 | 83.2 | 4.7 |
| Cairo (A) | 1016.0 | + 0.7 | 31.0 | + 1.2 | 17.2 | — 0.6 | 24.1 | 23.5 | 0.0 | 17.9 | — 0.4 | 55 | — 3 | — | — | — | 15.1 |
| Fayoum | 1015.1 | — | 33.0 | — | 17.2 | — | 25.1 | 24.2 | — | 17.6 | — | 49 | — | — | — | — | 8.7 |
| Minya (A) | 1014.6 | + 0.1 | 32.8 | + 1.6 | 14.8 | — 0.8 | 23.8 | 23.0 | — 0.1 | 17.3 | — 0.3 | 54 | — 2 | — | — | — | 8.0 |
| Assyout (A) | 1014.0 | + 0.6 | 31.9 | + 1.0 | 16.7 | — 1.3 | 24.3 | 24.0 | — 0.4 | 16.0 | — 1.5 | 39 | — 8 | — | — | — | 14.7 |
| Luxor (A) | 1013.6 | + 0.7 | 35.2 | + 0.1 | 14.8 | — 3.0 | 25.0 | 24.6 | 0.0 | 15.7 | — 2.3 | 34 | — 5 | — | — | — | 8.3 |
| Aswan (A) | 1012.2 | + 1.2 | 36.2 | — 1.3 | 17.6 | — 3.1 | 26.9 | 26.9 | — 1.7 | 14.5 | — 1.4 | 13 | — 1 | — | — | — | 16.7 |
| Siwa | 1016.7 | + 0.5 | 32.2 | + 0.5 | 14.1 | — 0.8 | 23.2 | 23.1 | — 0.1 | 15.2 | — 0.9 | 38 | — 7 | — | — | — | 11.1 |
| Behariya | 1014.8 | — 0.3 | 32.8 | + 1.7 | 16.1 | — 0.2 | 24.4 | 23.8 | + 0.1 | 16.4 | — 0.2 | 45 | — 1 | — | — | — | 8.7 |
| Farafra | 1016.6 | — | 32.2 | — | 14.9 | — | 23.6 | 23.2 | — | 14.6 | — | 34 | — | — | — | — | 15.4 |
| Dakhla | 1012.6 | + 0.7 | 34.6 | + 1.4 | 13.6 | — 3.8 | 24.1 | 23.9 | — 1.3 | 13.9 | — 1.0 | 26 | — 1 | — | — | — | 16.6 |
| Kharga | 1013.7 | — | 35.2 | — | 16.7 | — | 25.0 | 26.4 | — | 14.6 | — | 21 | — | 338.2 | 358.6 | 94.3 | 21.2 |
| Tor | 1013.2 | + 1.0 | 28.8 | — 1.1 | 16.3 | — 2.3 | 22.6 | 23.2 | — 1.0 | 18.7 | — 0.7 | 63 | + 2 | — | — | — | 5.9 |
| Hurghada | 1013.3 | + 1.3 | 30.0 | + 1.5 | 17.1 | — 2.6 | 23.6 | 23.6 | — 1.3 | 17.1 | — 2.4 | 49 | — 9 | — | — | — | 14.6 |
| Quseir | 1013.6 | + 1.7 | 29.2 | — 1.1 | 20.2 | — 2.8 | 24.7 | 25.1 | — 1.0 | 18.1 | — 1.8 | 48 | — 6 | — | — | — | 16.1 |

Table A2. — MAXIMUM AND MINIMUM AIR TEMPERATURES

OCTOBER — 1964

| Station | Maximum Temperature °C | | | | | | | | | Grass Min. Temp. | | Minimum Temperature °C | | | | | | | |
|----------------------------|------------------------|------|--------|------|----------------------------|-----|-----|-----|-----|------------------|----------------|------------------------|------|--------|-------|-----------------------------|----|----|-----|
| | Highest | Date | Lowest | Date | No. of Days with Max-Temp. | | | | | Mean | D. From Normal | Highest | Date | Lowest | Date | No. of Days with Min. Temp. | | | |
| | | | | | >25 | >30 | >35 | >40 | >45 | | | | | | | <10 | <5 | <0 | <-5 |
| Sallum | 36.8 | 10 | 24.5 | 29 | 27 | 10 | 2 | 0 | 0 | 17.4 | — | 22.8 | 10 | 16.1 | 4 | 0 | 0 | 0 | 0 |
| Mersa Natruh (A) | 34.2 | 10 | 24.4 | 7 | 27 | 6 | 0 | 0 | 0 | — | — | 20.8 | 10 | 14.0 | 18 | 0 | 0 | 0 | 0 |
| Alexandria (A) | 33.4 | 10 | 25.0 | 6 | 30 | 7 | 0 | 0 | 0 | — | — | 20.5 | 4 | 13.5 | 24 | 0 | 0 | 0 | 0 |
| Port Said (A) | 28.5 | 11 | 24.9 | 7 | 30 | 0 | 0 | 0 | 0 | 20.7 | — | 23.3 | 25 | 19.5 | 10 | 0 | 0 | 0 | 0 |
| El Arish | 30.6 | 11 | 26.0 | 14 | 31 | 2 | 0 | 0 | 0 | 15.7 | — | 22.6 | 4 | 13.4 | 28.31 | 0 | 0 | 0 | 0 |
| Gharza | 27.5 | 25 | 24.7 | 10 | 26 | 0 | 0 | 0 | 0 | 15.5 | — | 20.0 | 5 | 13.4 | 29 | 0 | 0 | 0 | 0 |
| Tanta | 33.3 | 11 | 27.8 | 31 | 31 | 21 | 0 | 0 | 0 | — | — | 18.2 | 16 | 13.7 | 29 | 0 | 0 | 0 | 0 |
| Cairo (A) | 34.1 | 20 | 28.3 | 4.5 | 31 | 20 | 0 | 0 | 0 | — | — | 21.0 | 16 | 12.3 | 27 | 0 | 0 | 0 | 0 |
| Fayoum | 37.3 | 22 | 29.4 | 5.6 | 31 | 26 | 8 | 0 | 0 | 14.1 | — | 19.0 | 22 | 15.0 | 25 | 0 | 0 | 0 | 0 |
| Minya (A) | 38.1 | 21 | 28.0 | 5 | 31 | 25 | 9 | 0 | 0 | 11.6 | — | 18.4 | 18 | 10.5 | 25 | 0 | 0 | 0 | 0 |
| Assyout (A) | 39.0 | 11 | 28.4 | 5 | 31 | 22 | 4 | 0 | 0 | 13.7 | — | 19.7 | 21 | 13.3 | 31 | 0 | 0 | 0 | 0 |
| Luxor (A) | 37.5 | 16 | 31.8 | 5 | 31 | 31 | 17 | 0 | 0 | — | — | 18.2 | 8 | 9.8 | 28 | 1 | 0 | 0 | 0 |
| Aswan (A) | 39.6 | 16 | 32.8 | 5 | 31 | 31 | 20 | 0 | 0 | — | — | 20.5 | 9 | 14.5 | 29 | 0 | 0 | 0 | 0 |
| Siwa | 37.5 | 11 | 27.7 | 31 | 31 | 24 | 6 | 0 | 0 | 12.3 | — | 17.6 | 2 | 9.5 | 28 | 1 | 0 | 0 | 0 |
| Bahariya | 37.6 | 20 | 28.7 | 6 | 31 | 24 | 9 | 0 | 0 | 14.7 | — | 21.4 | 21 | 13.7 | 9 | 0 | 0 | 0 | 0 |
| Farafra | 36.5 | 21 | 27.3 | 31 | 31 | 22 | 6 | 0 | 0 | 14.2 | — | 18.8 | 11 | 10.1 | 27 | 0 | 0 | 0 | 0 |
| Dakhla | 39.6 | 17 | 28.2 | 5 | 31 | 28 | 16 | 0 | 0 | 8.8 | — | 24.9 | 12 | 8.2 | 30 | 5 | 0 | 0 | 0 |
| Kharga | 39.8 | 17 | 29.4 | 5 | 31 | 30 | 17 | 0 | 0 | 14.7 | — | 23.0 | 11 | 11.2 | 31 | 0 | 0 | 0 | 0 |
| Tor | 32.2 | 24 | 27.2 | 1.31 | 31 | 5 | 0 | 0 | 0 | — | — | 18.7 | 3.10 | 12.7 | 26 | 0 | 0 | 0 | 0 |
| Burgada | 32.7 | 11 | 27.9 | 5 | 31 | 13 | 0 | 0 | 0 | 15.6 | — | 20.5 | 7 | 13.8 | 28 | 0 | 0 | 0 | 0 |
| Queir | 31.9 | 20 | 27.0 | 31 | 31 | 1 | 0 | 0 | 0 | 15.1 | — | 22.8 | 11 | 17.5 | 31 | 0 | 0 | 0 | 0 |

Table A 3.—SKY COVER AND RAINFALL

OCTOBER — 1964

| Station | Mean Sky Cover Oct. | | | | | Rainfall mms. | | | | | | | | | | |
|----------------------------|---------------------|------|------|------|-------|-----------------|-------------------|-------------------------|------|------------------------------------|------|------|------|-----|-----|-----|
| | 00 | 06 | 12 | 18 | Daily | Total Amount | D. From Normal | Max. Fall in one day | | Number of Days with Amount of Rain | | | | | | |
| | U.T. | U.T. | U.T. | U.T. | Mean | | | Amount | Date | <0.1 | ≥0.1 | ≥1.0 | ≥5.0 | ≥10 | ≥25 | ≥50 |
| Sellum (A) | 1.6 | 2.9 | 2.0 | 1.5 | 2.0 | 0.0 | —17.5 | 0.0 | — | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Mersa Matruh (A) | 0.4 | 1.6 | 1.5 | 1.2 | 1.2 | 0.0 | —15.4 | 0.0 | — | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Alexandria (A) | 1.4 | 2.9 | 1.3 | 1.3 | 1.8 | 0.4 | —7.5 | 0.4 | 3 | 0 | 1 | 0 | 0 | 0 | 0 | 0 |
| Port Said (A) | 0.6 | 1.5 | 0.7 | 0.9 | 0.9 | 0.0 | —2.4 | 0.0 | — | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| El Arish | 2.4 | 3.4 | 0.6 | 2.3 | 1.7 | 0.0 | —5.3 | 0.0 | — | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ghazza | 3.0 | 2.5 | 0.4 | 0.8 | 1.3 | tr. | —13.2 | tr. | 2 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| Tanta | — | 0.8 | 0.7 | 0.1 | — | 0.0 | —4.2 | 0.0 | — | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Cairo (A) | 2.3 | 2.7 | 1.0 | 0.2 | 1.4 | 0.0 | —0.1 | 0.0 | — | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Fayoum | — | 0.1 | 0.4 | 0.2 | — | 0.0 | —1.0 | 0.0 | — | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Minya (A) | 0.1 | 0.6 | 0.2 | 0.1 | 0.2 | 0.0 | —0.7 | 0.0 | — | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Assyout (A) | 0.0 | 0.0 | 0.1 | 0.0 | 0.1 | 0.0 | —tr. | 0.0 | — | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Luxor (A) | 0.1 | 0.0 | 0.3 | 0.2 | 0.3 | 0.0 | —tr. | 0.0 | — | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Aswan (A) | 0.1 | 0.1 | 0.2 | 0.3 | 0.2 | 0.0 | —0.2 | 0.0 | — | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Siwa | 0.1 | 0.8 | 0.8 | 0.5 | 1.0 | 0.0 | —0.4 | 0.0 | — | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Behariya | 0.0 | 1.7 | 0.4 | 0.1 | 0.5 | 0.0 | —0.2 | 0.0 | — | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Farsafa | 0.1 | 0.6 | 0.2 | 0.0 | 0.8 | 0.0 | —0.8 | 0.0 | — | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Dakhla | 0.0 | 0.1 | 0.2 | 0.0 | 0.1 | 0.0 | —tr. | 0.0 | — | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Kharga | 0.0 | 0.2 | 0.3 | 0.1 | 0.1 | 0.0 | —tr. | 0.0 | — | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Tor | 0.0 | 0.1 | 0.1 | 0.0 | 0.1 | 0.0 | —1.1 | 0.0 | — | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Hurgada | 0.1 | 0.2 | 0.2 | 0.0 | 0.0 | 0.0 | —tr. | 0.0 | — | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Quseir | 0.2 | 0.1 | 0.1 | 0.1 | 0.2 | 0.0 | —0.6 | 0.0 | — | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

OCTOBER — 1964

[illegible]

**Table A 5.—NUMBER IN HOURS OF OCCURRENCES OF CONCURRENT SURFACE
WIND SPEED AND DIRECTION RECORDED WITHIN SPECIFIED RANGES**

OCTOBER — 1964

| Station | Calm (hours) | Variable (hours) | Unrecorded (hours) | Wind speed in knots | Number in hours of occurrences of wind blowing from the ranges of directions indicated | | | | | | | | | | | | | All directions |
|----------------------|--------------|------------------|--------------------|---|---|-----------------------------|-----------------------------|---------------------------|--------------------------|---------------------------|-------------------------|--------------------------|--------------------------|--------------------------|-------------------------|---------------------------|-----------------------------|----------------|
| | | | | | 345 | 015 | 045 | 075 | 105 | 135 | 165 | 195 | 225 | 255 | 285 | 315 | | |
| | | | | | / | / | / | / | / | / | / | / | / | / | / | / | | |
| | | | | | 014 | 044 | 074 | 104 | 134 | 164 | 194 | 224 | 254 | 284 | 314 | 344 | | |
| Sallum | 42 | 7 | 0 | 1-10 11-27 28-47 ≥48 All speeds | 22 5 0 0 27 | 73 26 0 0 99 | 119 37 0 0 156 | 102 3 0 0 105 | 23 0 0 0 23 | 16 1 0 0 17 | 10 0 0 0 10 | 20 9 0 0 29 | 11 32 0 0 43 | 35 11 0 0 46 | 75 7 0 0 82 | 58 6 0 0 58 | 558 137 0 0 695 | |
| Mersa Matruh . (A) | 33 | 0 | 18 | 1-10 11-27 28-47 All speeds | 119 103 0 0 222 | 67 30 0 0 97 | 41 15 0 0 56 | 44 16 0 0 60 | 26 21 0 0 47 | 23 6 0 0 29 | 17 6 0 0 23 | 21 27 0 0 48 | 25 2 0 0 27 | 47 1 0 0 48 | 14 0 0 0 14 | 19 3 0 0 32 | 463 230 0 0 693 | |
| Alexandria . . . (A) | 53 | 0 | 1 | 1-10 11-27 28-47 All speeds | 179 30 0 0 209 | 156 40 0 0 196 | 87 3 0 0 90 | 39 0 0 0 39 | 34 0 0 0 34 | 21 0 0 0 21 | 16 0 0 0 16 | 11 0 0 0 11 | 6 0 0 0 6 | 3 0 0 0 3 | 7 0 0 0 7 | 45 13 0 0 58 | 604 86 0 0 690 | |
| Port Said . . . (A) | 0 | 2 | 0 | 1-10 11-27 28-47 All speeds | 185 121 0 0 306 | 222 60 0 0 282 | 50 7 0 0 57 | 6 0 0 0 6 | 3 0 0 0 3 | 12 0 0 0 12 | 8 0 0 0 8 | 0 0 0 0 0 | 6 0 0 0 6 | 10 0 0 0 10 | 8 0 0 0 8 | 25 19 0 0 44 | 535 207 0 0 742 | |
| Ghazza | 0 | 48 | 12 | 1-10 11-27 28-47 All speeds | 58 37 0 0 95 | 27 19 0 0 46 | 61 0 0 0 61 | 37 0 0 0 37 | 61 0 0 0 61 | 174 6 0 0 180 | 7 0 0 0 7 | 6 0 0 0 6 | 11 0 0 0 11 | 15 1 0 0 16 | 39 5 0 0 44 | 89 31 0 0 120 | 585 99 0 0 684 | |
| Fanta | 58 | 27 | 0 | 1-10 11-27 28-47 All speeds | 141 0 0 0 141 | 222 2 0 0 224 | 88 0 0 0 88 | 49 0 0 0 49 | 11 0 0 0 11 | 1 0 0 0 1 | 1 0 0 0 1 | 1 0 0 0 1 | 10 0 0 0 10 | 16 0 0 0 16 | 39 0 0 0 39 | 78 0 0 0 78 | 657 2 0 0 659 | |
| Cairo (A) | 5 | 0 | 34 | 1-10 11-27 28-47 All speeds | 23 9 0 0 32 | 105 117 0 0 222 | 170 102 0 0 272 | 93 43 0 0 136 | 20 16 0 0 36 | 0 0 0 0 0 | 0 0 0 0 0 | 0 0 0 0 0 | 0 0 0 0 0 | 0 0 0 0 0 | 1 0 0 0 1 | 5 1 0 0 6 | 417 288 0 0 705 | |
| Fayoum | 7 | 0 | 46 | 1-10 11-27 28-47 All speeds | 450 3 0 0 453 | 139 0 0 0 139 | 9 2 0 0 11 | 5 0 0 0 5 | 2 0 0 0 2 | 1 0 0 0 1 | 1 0 0 0 1 | 0 0 0 0 0 | 1 0 0 0 1 | 0 0 0 0 0 | 2 0 0 0 2 | 75 1 0 0 76 | 685 6 0 0 691 | |

**Table A 5 (contd.)—NUMBER IN HOURS OF OCCURRENCES OF CONCURRENT SURFACE
WIND SPEED AND DIRECTION RECORDED WITHIN SPECIFIED RANGES
OCTOBER — 1964**

| Station | calm (hours) | Variable (hours) | Unrecorded (hours) | Wind speed n knots | Number in hours of occurrences of wind blowing from the ranges of directions indicated | | | | | | | | | | | | All directions |
|----------------------|--------------|------------------|--------------------|-----------------------|---|------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|----------------|
| | | | | | 345 / 014 | 015 044 | 045 / 074 | 075 / 104 | 105 / 134 | 135 / 164 | 165 / 194 | 195 / 224 | 225 / 254 | 255 / 284 | 285 / 314 | 315 / 344 | |
| Minye (A) | 5 | 12 | 137 | 1-10 | 28 | 10 | 1 | 0 | 1 | 1 | 0 | 0 | 1 | 0 | 51 | 310 | 403 |
| | | | | 11-27 | 14 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 170 | 187 |
| | | | | 28-47 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | | | | ≥48 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | | | | All speeds | 42 | 10 | 1 | 0 | 1 | 1 | 0 | 0 | 1 | 0 | 54 | 480 | 590 |
| Asyout (A) | 3 | 0 | 0 | 1-10 | 1 | 9 | 4 | 5 | 4 | 5 | 1 | 0 | 101 | 95 | 311 | 77 | 613 |
| | | | | 11-27 | 1 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 3 | 50 | 62 | 128 |
| | | | | 28-47 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | | | | ≥48 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | | | | All speeds | 2 | 18 | 4 | 5 | 4 | 5 | 1 | 0 | 104 | 98 | 360 | 139 | 741 |
| Luxor (A) | 43 | 0 | 2 | 1-10 | 78 | 57 | 47 | 58 | 31 | 39 | 60 | 49 | 9 | 25 | 69 | 172 | 694 |
| | | | | 11-27 | 0 | 1 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 5 |
| | | | | 28-47 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | | | | ≥48 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | | | | All speeds | 78 | 58 | 48 | 58 | 32 | 39 | 60 | 49 | 9 | 25 | 69 | 174 | 699 |
| Aswan | 2 | 0 | 0 | 1-10 | 396 | 118 | 12 | 12 | 1 | 2 | 3 | 0 | 0 | 1 | 14 | 115 | 614 |
| | | | | 11-27 | 38 | 17 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 9 | 128 |
| | | | | 28-47 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | | | | ≥48 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | | | | All speeds | 434 | 135 | 12 | 14 | 1 | 2 | 3 | 0 | 0 | 1 | 16 | 124 | 742 |
| Siwa | 135 | 44 | 0 | 1-10 | 26 | 56 | 110 | 94 | 93 | 44 | 9 | 11 | 13 | 33 | 28 | 16 | 533 |
| | | | | 11-27 | 1 | 18 | 10 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 32 |
| | | | | 28-47 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | | | | ≥48 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | | | | All speeds | 27 | 74 | 120 | 95 | 93 | 45 | 9 | 11 | 13 | 33 | 28 | 17 | 565 |
| Dakhla | 1 | 39 | 1 | 1-10 | 90 | 88 | 42 | 12 | 7 | 10 | 17 | 42 | 62 | 72 | 95 | 153 | 690 |
| | | | | 11-27 | 0 | 3 | 10 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 13 |
| | | | | 28-47 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | | | | ≥48 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | | | | All speeds | 90 | 91 | 52 | 12 | 7 | 10 | 17 | 42 | 62 | 72 | 95 | 153 | 703 |
| Hurghada | 13 | 0 | 1 | 1-10 | 48 | 32 | 2 | 0 | 3 | 1 | 4 | 1 | 6 | 13 | 154 | 51 | 315 |
| | | | | 11-27 | 95 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 140 | 171 | 413 |
| | | | | 28-47 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 |
| | | | | ≥48 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | | | | All speeds | 143 | 35 | 2 | 0 | 3 | 1 | 4 | 1 | 6 | 17 | 294 | 224 | 730 |
| Quesir | 6 | 5 | 9 | 1-10 | 96 | 7 | 0 | 0 | 0 | 0 | 0 | 3 | 2 | 35 | 221 | 107 | 471 |
| | | | | 11-27 | 181 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 13 | 53 | 253 |
| | | | | 28-47 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | | | | ≥48 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | | | | All speeds | 277 | 9 | 0 | 0 | 0 | 0 | 0 | 3 | 2 | 39 | 234 | 160 | 724 |

Table B 1.—UPPER AIR CLIMATOLOGICAL DATA

OCTOBER — 1964

| Station | Pressure Surface (Millibar) | Altitude of Pressure Surface (gpm) | | | | Temperature (°C) | | | | Dew Point (°C) | |
|------------------------|--------------------------------|------------------------------------|-------|----------|-----------|------------------|-------|---------|--------|----------------|-------|
| | | N | Mean | Highest | Lowest | N | Mean | Highest | Lowest | N | Mean |
| Merza Matruh 0000 U.T. | Surface . . . | 31 | 1018* | 1020m.b. | 1013 m.b. | 31 | 19.1 | 23.4 | 16.2 | 31 | 14.9 |
| | 1000 . . . | 31 | 184 | 207 | 165 | 31 | 20.3 | 27.0 | 15.0 | 31 | 14.8 |
| | 850 . . . | 31 | 1579 | 1605 | 1554 | 31 | 15.1 | 20.2 | 8.8 | 21 | -9.0 |
| | 700 . . . | 31 | 3188 | 3228 | 3162 | 31 | 4.4 | 8.2 | 1.9 | 12 | -9.4 |
| | 600 . . . | 31 | 4428 | 4495 | 4398 | 31 | -3.2 | 3.1 | -14.9 | 4 | -15.7 |
| | 500 . . . | 31 | 5876 | 5933 | 5787 | 31 | -12.6 | -5.1 | -17.8 | 3 | -27.9 |
| | 400 . . . | 31 | 7516 | 7689 | 7443 | 31 | -25.1 | -18.0 | -30.2 | 1 | -37.6 |
| | 300 . . . | 31 | 9534 | 9696 | 9400 | 31 | -40.4 | -34.0 | -46.0 | — | — |
| | 200 . . . | 29 | 12230 | 12400 | 12030 | 29 | -55.4 | -49.5 | -61.9 | — | — |
| | 150 . . . | 26 | 14001 | 14202 | 13816 | 26 | -62.6 | -58.5 | -66.0 | — | — |
| | 100 . . . | 24 | 16462 | 16592 | 16259 | 24 | -69.3 | -64.2 | -76.8 | — | — |
| | 70 . . . | 19 | 18068 | 18700 | 18400 | 19 | -65.0 | -62.0 | -68.9 | — | — |
| | 50 . . . | 13 | 20654 | 20769 | 20485 | 13 | -59.0 | -57.1 | -63.4 | — | — |
| | 30 . . . | 10 | 23928 | 24058 | 23798 | 10 | -53.8 | -51.9 | -56.7 | — | — |
| | 20 . . . | 8 | 26579 | 26704 | 26422 | 8 | -49.3 | -48.0 | -51.5 | — | — |
| | 10 . . . | — | — | — | — | — | — | — | — | — | — |
| Helwan 0000 U.T. | Surface . . . | 31 | 999 * | 1002m.b. | 996m.b. | 31 | 20.4 | 25.0 | 18.1 | 61 | 12.5 |
| | 1000 . . . | 31 | 135 | 158 | 108 | 16 | 20.6 | 25.0 | 18.1 | 16 | 12.1 |
| | 850 . . . | 31 | 1536 | 1570 | 1506 | 31 | 16.9 | 21.7 | 8.4 | 23 | -4.5 |
| | 700 . . . | 31 | 3158 | 3197 | 3115 | 31 | 6.7 | 10.0 | 2.3 | 8 | -11.5 |
| | 600 . . . | 31 | 4406 | 4458 | 4358 | 31 | -0.2 | 5.2 | -4.1 | — | — |
| | 500 . . . | 31 | 5838 | 5908 | 5774 | 31 | -10.2 | -4.0 | -15.3 | 1 | -27.8 |
| | 400 . . . | 31 | 7517 | 7608 | 7422 | 31 | -22.8 | -16.6 | -27.5 | 1 | -30.2 |
| | 300 . . . | 31 | 9563 | 9686 | 9439 | 31 | -37.5 | -32.4 | -42.3 | — | — |
| | 200 . . . | 31 | 12256 | 12402 | 12093 | 31 | -54.8 | -50.7 | -60.3 | — | — |
| | 150 . . . | 31 | 14056 | 14207 | 13891 | 31 | -63.9 | -60.4 | -66.7 | — | — |
| | 100 . . . | 28 | 16493 | 16624 | 16337 | 28 | -71.9 | -67.3 | -78.5 | — | — |
| | 70 . . . | 24 | 18606 | 18740 | 18500 | 24 | -68.6 | -64.5 | -73.2 | — | — |
| | 60 . . . | 20 | 19530 | 19660 | 19423 | 20 | -64.8 | -62.0 | -67.1 | — | — |
| | 50 . . . | 19 | 20661 | 20786 | 20558 | 19 | -60.8 | -58.1 | -65.7 | — | — |
| | 40 . . . | 18 | 22057 | 22190 | 21944 | 18 | -58.4 | -54.6 | -61.1 | — | — |
| | 30 . . . | 17 | 23874 | 24026 | 23756 | 17 | -54.5 | -52.2 | -56.5 | — | — |
| | 20 . . . | 13 | 26507 | 26650 | 26388 | 13 | -50.1 | -46.1 | -52.4 | — | — |
| | 10 . . . | 1 | 31075 | 31132 | 31008 | 6 | -43.4 | -37.7 | -48.0 | — | — |
| Aswan 0000 U.T. | Surface . . . | 31 | 989* | 991m.b. | 988m.b. | 31 | 20.5 | 23.8 | 17.6 | 31 | 2.5 |
| | 1000 . . . | 31 | 98 | 115 | 58 | — | — | — | — | — | — |
| | 850 . . . | 31 | 1512 | 1527 | 1479 | 31 | 20.1 | 24.9 | 16.0 | 20 | -1.3 |
| | 700 . . . | 31 | 3144 | 3198 | 3087 | 31 | 7.0 | 11.0 | 2.8 | 17 | -8.4 |
| | 600 . . . | 31 | 4399 | 4462 | 4330 | 31 | 1.8 | 6.2 | -1.2 | — | — |
| | 500 . . . | 31 | 5844 | 5914 | 5726 | 31 | -7.5 | -4.7 | -12.0 | — | — |
| | 400 . . . | 31 | 7543 | 7617 | 7443 | 31 | -19.4 | -16.7 | -21.7 | — | — |
| | 300 . . . | 31 | 9616 | 9720 | 9510 | 31 | -35.2 | -32.0 | -38.5 | 1 | -42.0 |
| | 200 . . . | 31 | 12328 | 12450 | 12192 | 31 | -54.8 | -53.5 | -55.7 | — | — |
| | 150 . . . | 31 | 14118 | 14240 | 13969 | 31 | -66.7 | -64.2 | -69.3 | — | — |
| | 100 . . . | 26 | 16504 | 16617 | 16363 | 26 | -76.7 | -70.7 | -83.8 | — | — |
| | 70 . . . | 17 | 18555 | 18706 | 18180 | 17 | -70.0 | -66.2 | -73.1 | — | — |
| | 50 . . . | 13 | 20626 | 20792 | 20477 | 13 | -60.3 | -44.2 | -63.7 | — | — |
| | 30 . . . | 7 | 23826 | 23942 | 23701 | 7 | -53.2 | -52.0 | -54.8 | — | — |
| | 20 . . . | 5 | 26454 | 26573 | 26329 | 5 | -49.1 | -46.4 | -50.6 | — | — |
| | 10 . . . | 1 | 30974 | — | — | 1 | -47.0 | — | — | — | — |

N = The number of cases the element has been observed during the month.

* The atmospheric pressure corrected to the elevation of the radiosonde station.

Table B 1 (contd.).—UPPER AIR CLIMATOLOGICAL DATA
OCTOBER — 1964

| Station | Pressure Surface Millibar | Altitude of Pressure Surface (gpm) | | | | Temperature (°C) | | | | Dew Point (°C) | |
|----------------------------|------------------------------|------------------------------------|------------------------|------------------------|------------------------|------------------|-------|---------|--------|----------------|-------|
| | | N | Mean | Highest | Lowest | N | Mean | Highest | Lowest | N | Mean |
| Mersa Matruh (A) 1200 U.T. | Surface . . . | 31 | 1018 [*] m.b. | 1021 [*] m.b. | 1015 [*] m.b. | 31 | 24.2 | 32.0 | 22.0 | 31 | 17.8 |
| | 1000 . . . | 31 | 182 | 202 | 158 | 31 | 23.3 | 30.4 | 19.0 | 31 | 13.8 |
| | 850 . . . | 31 | 1579 | 1614 | 1542 | 31 | 14.5 | 18.8 | 10.0 | 20 | -2.4 |
| | 700 . . . | 31 | 3097 | 3225 | 3139 | 31 | 4.2 | 7.8 | 1.0 | 11 | -10.6 |
| | 600 . . . | 31 | 4429 | 4477 | 4359 | 31 | 2.8 | -1.0 | -8.9 | 4 | -15.9 |
| | 500 . . . | 31 | 5846 | 5932 | 5769 | 31 | 12.5 | -4.5 | -20.1 | 2 | -28.0 |
| | 400 . . . | 31 | 7512 | 7636 | 7397 | 31 | -24.6 | -18.0 | -29.3 | — | — |
| | 300 . . . | 33 | 9541 | 9683 | 9325 | 31 | -39.9 | -34.0 | -44.0 | — | — |
| | 200 . . . | 29 | 12225 | 12422 | 12000 | 29 | -54.9 | -50.1 | -61.0 | — | — |
| | 150 . . . | 26 | 14012 | 14182 | 13808 | 26 | -62.0 | -56.9 | -65.3 | — | — |
| | 100 . . . | 25 | 16480 | 16626 | 16303 | 25 | -68.3 | -63.5 | -74.9 | — | — |
| | 70 . . . | 21 | 18626 | 18800 | 18440 | 21 | -64.2 | -61.6 | -69.4 | — | — |
| | 50 . . . | 16 | 20722 | 20904 | 20467 | 16 | -58.3 | -54.6 | -62.2 | — | — |
| | 30 . . . | 12 | 23979 | 24137 | 23757 | 12 | -47.6 | -43.6 | -56.0 | — | — |
| | 20 . . . | 10 | 26627 | 26825 | 26306 | 1 | -46.8 | -41.0 | -51.9 | — | — |
| | 10 . . . | 1 | 31371 | — | — | — | -41.7 | — | — | — | — |
| Helwan 1200 U.T. | Surface . . . | 31 | 998 [*] m.b. | 1001 [*] m.b. | 995 [*] m.b. | 31 | 30.6 | 34.4 | 26.8 | 31 | 6.7 |
| | 1000 . . . | 31 | 127 | 149 | 100 | 6 | 31.5 | 33.7 | 27.9 | 6 | 3.8 |
| | 850 . . . | 31 | 1540 | 1573 | 1501 | 31 | 17.0 | 21.8 | 12.3 | 22 | 1.1 |
| | 700 . . . | 31 | 3161 | 3207 | 3110 | 31 | 6.5 | 9.7 | 3.0 | 8 | -14.3 |
| | 600 . . . | 31 | 4408 | 4469 | 4356 | 31 | -0.4 | 5.1 | -4.1 | — | — |
| | 500 . . . | 31 | 5839 | 5921 | 5772 | 31 | -10.0 | -4.1 | -15.2 | — | — |
| | 400 . . . | 31 | 7517 | 7611 | 7415 | 31 | -22.7 | -18.0 | -28.5 | 2 | -37.4 |
| | 300 . . . | 31 | 9564 | 9686 | 9420 | 31 | -37.2 | -32.0 | -42.6 | — | — |
| | 200 . . . | 31 | 12260 | 12435 | 12082 | 31 | -54.4 | -48.4 | -61.1 | — | — |
| | 150 . . . | 31 | 14065 | 14200 | 13865 | 31 | -63.3 | -59.4 | -67.6 | — | — |
| | 100 . . . | 30 | 16502 | 16666 | 16310 | 30 | -71.2 | -66.7 | -75.8 | — | — |
| | 70 . . . | 27 | 18625 | 18780 | 18460 | 27 | -69.5 | -63.3 | -70.8 | — | — |
| | 60 . . . | 26 | 19568 | 19727 | 19380 | 26 | -63.3 | -58.6 | -66.7 | — | — |
| | 50 . . . | 25 | 20701 | 20861 | 20504 | 25 | -59.2 | -52.1 | -63.3 | — | — |
| | 40 . . . | 21 | 22117 | 22307 | 21970 | 21 | -55.4 | -51.3 | -58.1 | — | — |
| | 30 . . . | 20 | 23966 | 24179 | 23801 | 20 | -51.9 | -49.0 | -54.8 | — | — |
| | 20 . . . | 12 | 26625 | 26826 | 26524 | 12 | -47.5 | -53.4 | -51.1 | — | — |
| | 10 . . . | 3 | 31234 | 31365 | 31140 | 3 | -42.7 | -37.9 | -47.3 | — | — |
| Aswan 1200 U.T. | Surface . . . | 29 | 988 [*] m.b. | 990 [*] m.b. | 986 [*] m.b. | 29 | 35.1 | 38.5 | 29.5 | 29 | 3.0 |
| | 1000 . . . | 29 | 88 | 105 | 66 | — | — | — | — | — | — |
| | 850 . . . | 29 | 1522 | 1550 | 1463 | 29 | 12.3 | 26.1 | 17.4 | 15 | -1.7 |
| | 700 . . . | 29 | 3180 | 3200 | 3079 | 29 | 7.9 | 11.5 | 4.5 | 15 | -12.0 |
| | 600 . . . | 29 | 4417 | 4473 | 4331 | 29 | 1.8 | 4.4 | -0.2 | 2 | -12.8 |
| | 500 . . . | 29 | 5861 | 5936 | 5773 | 29 | -7.1 | -4.4 | -9.8 | — | — |
| | 400 . . . | 29 | 7565 | 7646 | 7473 | 29 | -15.3 | -15.0 | -23.0 | 2 | -29.2 |
| | 300 . . . | 29 | 9613 | 9736 | 9549 | 29 | -34.4 | -31.0 | -37.8 | 1 | -42.9 |
| | 200 . . . | 29 | 12371 | 12463 | 12241 | 29 | -54.1 | -51.1 | -57.1 | — | — |
| | 150 . . . | 29 | 14159 | 14279 | 14029 | 29 | -65.3 | -62.2 | -68.9 | — | — |
| | 100 . . . | 27 | 16561 | 16708 | 16442 | 27 | -75.2 | -70.7 | -80.4 | — | — |
| | 70 . . . | 15 | 18646 | 18776 | 18530 | 15 | -68.9 | -67.2 | -72.4 | — | — |
| | 50 . . . | 11 | 20690 | 20760 | 20602 | 11 | -59.3 | -56.1 | -62.4 | — | — |
| | 30 . . . | 8 | 23954 | 24033 | 23871 | 8 | -50.8 | -47.8 | -55.6 | — | — |
| | 20 . . . | 5 | 26621 | 26751 | 26527 | 5 | -45.5 | -42.3 | -48.5 | — | — |
| | 10 . . . | 2 | 31274 | 31321 | 31228 | 2 | -37.4 | -36.2 | -38.7 | — | — |

N = The number of cases the element has been observed during the month.

* The atmospheric pressure corrected to the elevation of the radiosonde stations.

**Table B 2.—MEAN AND EXTREME VALUES OF THE FREEZING LEVEL AND THE TROPOPAUSE.
THE HIGHEST WIND SPEED IN THE UPPER AIR
OCTOBER — 1964**

| Station | Freezing Level | | | | | | | | | First Tropopause | | | | | | | | | Highest wind speed | | | |
|-------------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|------------------|----------------|------------------|----------------|----------------|------------------|----------------|----------------|------------------|--------------------|----------------|---------------------|----------------|
| | Mean | | | Highest | | | Lowest | | | Mean | | | Highest | | | Lowest | | | Altitude (gpm) | Pressure (mb.) | Direction (000—360) | Speed in Knots |
| | Altitude (gpm) | Pressure (mb.) | Dew point (°C) | Altitude (gpm) | Pressure (mb.) | Dew point (°C) | Altitude (gpm) | Pressure (mb.) | Dew point (°C) | Altitude (gpm) | Pressure (mb.) | Temperature (°C) | Altitude (gpm) | Pressure (mb.) | Temperature (°C) | Altitude (gpm) | Pressure (mb.) | Temperature (°C) | | | | |
| 0000 U.T. | | | | | | | | | | | | | | | | | | | | | | |
| Mersa Matruh (A) | 3950 (31) | 637 (31) | - 9 (8) | 5290 | 540 | — | 3380 | 684 | -11.2 | 13099 (23) | 168 (23) | -64.6 (23) | 16561 | 100 | -71.8 | 10410 | 258 | -48.5 | 2235 | 199 | 238 | 130 |
| Helwan | 4442 (31) | 608 (31) | -15.8 (5) | 5360 | 534 | — | 3460 | 674 | -15.4 | 15691 (25) | 116 (25) | -71.0 (25) | 17200 | 88 | -74.0 | 12600 | 185 | -63.0 | 11910 | 208 | 250 | 116 |
| Aswan (A) | 4623 (31) | 581 (31) | -10.1 (3) | 5320 | 538 | — | 3630 | 658 | -10.2 | 16030 (19) | 111 (19) | -75.3 (19) | 17000 | 102 | -74.2 | 14097 | 150 | -68.4 | 12800 | 190 | 270 | 17 |
| 1200 U.T. | | | | | | | | | | | | | | | | | | | | | | |
| Mersa Matruh (A) | 3962 (31) | 634 (31) | -13.3 (19) | 5200 | 548 | — | 3210 | 693 | -14.0 | 12372 (25) | 162 (25) | -63.3 (25) | 16554 | 100 | -74.0 | 10170 | 273 | -45.8 | 13125 | 173 | 278 | 149 |
| Helwan | 4271 (31) | 611 (31) | -18.9 (2) | 5210 | 543 | — | 2600 | 750 | — | 15917 (29) | 112 (29) | -70.7 (29) | 18520 | 70 | -68.2 | 12020 | 202 | -61.0 | 10745 | 253 | 240 | 110 |
| Aswan (A) | 4701 (29) | 582 (29) | -21.3 (4) | 5230 | 545 | — | 3530 | 665 | -12.2 | 15780 (20) | 115 (20) | -73.1 (20) | 17130 | 91 | -74.1 | 13360 | 016 | 7.1 | 11030 | 246 | 210 | 80 |

Table B 3.—NUMBER OF OCCURRENCES OF WIND DIRECTION WITHIN SPECIFIED RANGES AND THE MEAN SCALAR WIND SPEED AT THE STANDARD AND SELECTED PRESSURE SURFACES.
MERSA MATRUH (A) OCTOBER — 1964

| Time | Pressure Surface (Millibar.) | Wind between specified ranges of direction (000—360)* | | | | | | | | | | | | | | | | | | | | Number of Calm winds | Total Number of Observations (T N) | Mean Sealar wind Speed (Knots) | | | | |
|-----------|---------------------------------|---|------|-----|------|-----|------|-----|------|-----|------|-----|------|-----|------|-----|------|-----|------|-----|------|-------------------------|---------------------------------------|-----------------------------------|------|------|------|------|
| | | 345 | | 015 | | 045 | | 075 | | 105 | | 135 | | 165 | | 195 | | 225 | | 255 | | | | | 285 | | 315 | |
| | | / | | / | | / | | / | | / | | / | | / | | / | | / | | / | | | | | / | | / | |
| | | 014 | 044 | 074 | 104 | 134 | 164 | 194 | 224 | 254 | 284 | 314 | 344 | N | (ff) | N | (ff) | N | (ff) | N | (ff) | | | | N | (ff) | N | (ff) |
| | | N | (ff) | N | (ff) | N | (ff) | N | (ff) | N | (ff) | N | (ff) | N | (ff) | N | (ff) | N | (ff) | N | (ff) | N | (ff) | N | (ff) | N | (ff) | |
| | | m | m | m | m | m | m | m | m | m | m | m | m | m | m | m | m | m | m | m | m | m | m | m | m | m | m | |
| 0000 U.T. | Surface | 6 | 12 | 2 | 6 | 3 | 5 | 4 | 7 | 1 | 11 | 2 | 7 | 1 | 14 | 2 | 13 | 1 | 10 | 1 | 5 | 1 | 6 | 2 | 10 | 5 | 31 | 8 |
| | 1000 | 9 | 10 | 3 | 10 | 2 | 6 | 3 | 12 | 3 | 19 | 0 | — | 0 | — | 2 | 16 | 0 | — | 0 | — | 1 | 9 | 2 | 24 | 3 | 28 | 11 |
| | 850 | 3 | 20 | 8 | 18 | 3 | 16 | 2 | 17 | 1 | 10 | 1 | 16 | 1 | 10 | 0 | — | 2 | 3 | 0 | — | 2 | 22 | 3 | 10 | 1 | 27 | 15 |
| | 700 | 3 | 10 | 6 | 8 | 3 | 18 | 3 | 11 | 3 | 11 | 0 | — | 0 | — | 0 | — | 4 | 17 | 1 | 9 | 3 | 14 | 4 | 11 | 0 | 30 | 15 |
| | 600 | 0 | — | 3 | 7 | 1 | 11 | 4 | 10 | 2 | 10 | 0 | — | 2 | 10 | 1 | 14 | 4 | 21 | 4 | 12 | 5 | 16 | 4 | 14 | 0 | 30 | 13 |
| | 500 | 1 | 9 | 1 | 8 | 0 | — | 0 | — | 1 | 15 | 2 | 10 | 2 | 32 | 1 | 37 | 7 | 19 | 8 | 14 | 6 | 13 | 0 | — | 1 | 30 | 16 |
| | 400 | 1 | 21 | 0 | — | 0 | — | 0 | — | 1 | 17 | 0 | — | 0 | — | 1 | 80 | 12 | 30 | 10 | 24 | 3 | 22 | 2 | 19 | 0 | 30 | 25 |
| | 300 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 1 | 47 | 16 | 38 | 10 | 32 | 2 | 38 | 0 | — | 0 | 29 | 36 |
| | 200 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 1 | 36 | 12 | 66 | 7 | 38 | 2 | 66 | 6 | — | 0 | 22 | 55 |
| | 150 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 1 | 54 | 7 | 48 | 7 | 48 | 1 | 12 | 0 | — | 0 | 16 | 46 |
| | 100 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 1 | 62 | 5 | 48 | 3 | 27 | 1 | 47 | 0 | — | 0 | 10 | 43 |
| | 70 | 1 | 1 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 2 | 8 | 2 | 5 | 1 | 2 | 0 | — | 0 | 6 | 5 |
| | 60 | 0 | — | 1 | 17 | 2 | 1 | 1 | 9 | 0 | — | 0 | — | 0 | — | 0 | — | 1 | 12 | 1 | 11 | 0 | — | 0 | — | 0 | 6 | 8 |
| | 50 | 0 | — | 0 | — | 0 | — | 2 | 8 | 0 | — | 0 | — | 0 | — | 1 | 10 | 0 | — | 2 | 6 | 0 | — | 0 | — | 0 | 5 | 9 |
| | 40 | 0 | — | 0 | — | 1 | 20 | 1 | 9 | 0 | — | 0 | — | 0 | — | 0 | — | 1 | 5 | 0 | — | 2 | 2 | 0 | — | 0 | 5 | 7 |
| 30 | 0 | — | 0 | — | 0 | — | 1 | 6 | 1 | 21 | 0 | — | 0 | — | 0 | — | 0 | — | 1 | 8 | 0 | — | 0 | — | 0 | 3 | 12 | |
| 20 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 1 | 80 | 0 | — | 0 | — | 0 | 1 | 80 | |
| 10 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | |
| 1800 U.T. | Surface | 8 | 10 | 10 | 12 | 3 | 13 | 3 | 13 | 0 | — | 0 | — | 0 | — | 1 | 8 | 0 | — | 0 | — | 5 | 14 | 1 | 14 | 1 | 31 | 12 |
| | 1000 | 8 | 12 | 6 | 10 | 1 | 8 | 3 | 14 | 1 | 14 | 1 | 14 | 0 | — | 1 | 9 | 2 | 2 | 3 | 9 | 7 | 13 | 0 | — | 0 | 30 | 12 |
| | 850 | 6 | 16 | 6 | 17 | 3 | 12 | 3 | 18 | 2 | 14 | 2 | 19 | 0 | — | 0 | — | 1 | 14 | 3 | 9 | 1 | 9 | 3 | 13 | 1 | 31 | 14 |
| | 700 | 4 | 13 | 5 | 13 | 5 | 13 | 4 | 9 | 1 | 5 | 1 | 5 | 1 | 5 | 2 | 4 | 3 | 15 | 2 | 16 | 2 | 7 | 2 | 15 | 0 | 31 | 11 |
| | 600 | 3 | 8 | 2 | 10 | 0 | — | 5 | 6 | 3 | 10 | 0 | — | 1 | 20 | 4 | 18 | 5 | 12 | 6 | 14 | 1 | 9 | 1 | 18 | 0 | 31 | 12 |
| | 500 | 3 | 13 | 0 | — | 1 | 8 | 0 | — | 1 | 10 | 0 | — | 2 | 10 | 5 | 20 | 6 | 19 | 9 | 13 | 2 | 14 | 2 | 12 | 0 | 31 | 16 |
| | 400 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 5 | 28 | 9 | 30 | 7 | 31 | 8 | 20 | 2 | 26 | 0 | 31 | 27 |
| | 300 | 0 | — | 0 | — | 0 | — | 1 | 4 | 0 | — | 0 | — | 0 | — | 4 | 37 | 9 | 40 | 12 | 44 | 4 | 32 | 1 | 35 | 0 | 31 | 39 |
| | 200 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 4 | 46 | 9 | 54 | 14 | 49 | 2 | 44 | 0 | — | 0 | 29 | 50 |
| | 150 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 2 | 64 | 10 | 45 | 11 | 46 | 1 | 50 | 0 | — | 0 | 24 | 48 |
| | 100 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 1 | 25 | 10 | 23 | 8 | 27 | 1 | 17 | 0 | — | 1 | 21 | 23 |
| | 70 | 0 | — | 1 | 3 | 0 | — | 1 | 13 | 1 | 10 | 0 | — | 2 | 6 | 1 | 28 | 2 | 8 | 2 | 8 | 1 | 6 | 0 | — | 0 | 11 | 9 |
| | 60 | 0 | — | 0 | — | 0 | — | 2 | 10 | 2 | 8 | 0 | — | 0 | — | 2 | 9 | 2 | 8 | 1 | 9 | 1 | 6 | 0 | — | 0 | 10 | 8 |
| | 50 | 0 | — | 0 | — | 0 | — | 2 | 11 | 1 | 3 | 0 | — | 0 | — | 1 | 7 | 1 | 9 | 2 | 6 | 0 | — | 0 | — | 1 | 8 | 7 |
| | 40 | 0 | — | 0 | — | 0 | — | 1 | 14 | 0 | — | 0 | — | 0 | — | 1 | 7 | 0 | — | 2 | 11 | 1 | 21 | 1 | 10 | 0 | 6 | 12 |
| 30 | 0 | — | 0 | — | 0 | — | 0 | — | 1 | 10 | 0 | — | 0 | — | 0 | — | 2 | 7 | 2 | 13 | 1 | 11 | 0 | — | 0 | 6 | 10 | |
| 20 | 0 | — | 0 | — | 0 | — | 1 | 10 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 3 | 31 | 0 | — | 0 | — | 0 | 4 | 26 | |
| 10 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | |

N — The number of cases the element has been observed during the month.

TN — The total number of cases the wind has been observed for all directions during the month.

Table B 3.(contd.)—NUMBER OF OCCURRENCES OF WIND DIRECTION WITHIN SPECIFIED RANGES AND THE MEAN SCALAR WIND SPEED AT THE STANDARD AND SELECTED PRESSURE SURFACES.

HELWAN — OCTOBER 1964

| Time | Pressure Surface (Millibar) | Wind between specified ranges of direction (000-360)* | | | | | | | | | | | | | | | | | | | | | | | | Number of Calm winds | Total Number of Observations (TN) | Mean Scalar wind Speed (Knots) |
|-----------|--------------------------------|---|------|-----|------|-----|------|-----|------|-----|------|-----|------|-----|------|-----|------|-----|------|-----|------|-----|------|-----|------|-------------------------|--------------------------------------|-----------------------------------|
| | | 345 | | 015 | | 045 | | 075 | | 105 | | 135 | | 165 | | 195 | | 225 | | 255 | | 285 | | 315 | | | | |
| | | / | | / | | / | | / | | / | | / | | / | | / | | / | | / | | / | | / | | | | |
| | | 014 | 044 | 074 | 104 | 134 | 164 | 194 | 224 | 254 | 284 | 314 | 344 | | | | | | | | | | | | | | | |
| N | (ff) | N | (ff) | N | (ff) | N | (ff) | N | (ff) | N | (ff) | N | (ff) | N | (ff) | N | (ff) | N | (ff) | N | (ff) | N | (ff) | N | (ff) | | | |
| m | m | m | m | m | m | m | m | m | m | m | m | m | m | m | m | m | m | m | m | m | m | m | m | m | m | | | |
| 0000 U.T. | Surface | 2 | 6 | 11 | 10 | 15 | 14 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 1 | 8 | 1 | 6 | 1 | 31 | 11 |
| | 1000 | 2 | 6 | 7 | 12 | 5 | 19 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 1 | 16 | 0 | — | 1 | 16 | 13 |
| | 850 | 3 | 16 | 8 | 9 | 6 | 13 | 8 | 10 | 1 | 4 | 0 | — | 1 | 8 | 0 | — | 0 | — | 2 | 4 | 1 | 10 | 1 | 8 | 0 | 31 | 10 |
| | 700 | 4 | 7 | 2 | 10 | 3 | 10 | 1 | 7 | 2 | 6 | 3 | 6 | 4 | 10 | 3 | 15 | 2 | 12 | 4 | 7 | 3 | 13 | 0 | — | 0 | 31 | 9 |
| | 600 | 5 | 11 | 1 | 8 | 2 | 17 | 1 | 6 | 1 | 12 | 0 | — | 2 | 12 | 3 | 16 | 7 | 12 | 6 | 14 | 1 | 8 | 2 | 13 | 0 | 31 | 12 |
| | 500 | 3 | 14 | 0 | — | 0 | — | 1 | 13 | 0 | — | 1 | 22 | 1 | 6 | 4 | 16 | 7 | 22 | 7 | 21 | 2 | 13 | 5 | 14 | 0 | 31 | 17 |
| | 400 | 1 | 20 | 0 | — | 0 | — | 1 | 7 | 0 | — | 1 | 24 | 0 | — | 2 | 30 | 11 | 31 | 6 | 32 | 4 | 36 | 5 | 18 | 0 | 31 | 29 |
| | 300 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 1 | 26 | 12 | 53 | 9 | 45 | 8 | 31 | 1 | 30 | 0 | 31 | 43 |
| | 200 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 1 | 57 | 11 | 54 | 13 | 56 | 6 | 48 | 0 | — | 0 | 31 | 54 |
| | 150 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 1 | 30 | 1 | 24 | 10 | 50 | 15 | 46 | 2 | 12 | 0 | — | 0 | 29 | 44 |
| | 100 | 1 | 7 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 3 | 21 | 2 | 24 | 7 | 30 | 5 | 23 | 4 | 42 | 0 | — | 0 | 31 | 28 |
| | 70 | 1 | 19 | 0 | — | 2 | 14 | 0 | — | 1 | 6 | 0 | — | 1 | 17 | 1 | 19 | 1 | 6 | 3 | 22 | 0 | — | 2 | 9 | 0 | 12 | 15 |
| | 60 | 3 | 7 | 2 | 10 | 1 | 24 | 1 | 17 | 0 | — | 0 | — | 0 | — | 3 | 12 | 0 | — | 1 | 10 | 0 | — | 0 | — | 0 | 11 | 12 |
| | 50 | 1 | 10 | 1 | 4 | 1 | 24 | 2 | 8 | 0 | — | 2 | 12 | 1 | 11 | 0 | — | 0 | — | 2 | 10 | 0 | — | 0 | — | 0 | 10 | 11 |
| 40 | 0 | — | 0 | — | 2 | 7 | 3 | 17 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 1 | 11 | 0 | — | 0 | — | 0 | 6 | 13 | |
| 30 | 0 | — | 0 | — | 1 | 16 | 1 | 14 | 0 | — | 1 | 9 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | 3 | 13 | |
| 20 | 0 | — | 0 | — | 0 | — | 1 | 11 | 0 | — | 1 | 15 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | 2 | 13 | |
| 10 | 0 | — | 0 | — | 0 | — | 1 | 34 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | 1 | 34 | |
| 1200 U.T. | Surface | 6 | 12 | 17 | 13 | 4 | 15 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 1 | 5 | 0 | — | 1 | 12 | 2 | 12 | 0 | 31 | 13 |
| | 1000 | 0 | — | 5 | 15 | 1 | 17 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 1 | 0 | 0 | — | 0 | 6 | 15 |
| | 850 | 4 | 9 | 5 | 12 | 8 | 12 | 4 | 6 | 1 | 4 | 2 | 4 | 5 | 8 | 0 | — | 0 | — | 1 | 7 | 1 | 2 | 0 | — | 0 | 31 | 9 |
| | 700 | 1 | 4 | 4 | 8 | 4 | 10 | 1 | 3 | 1 | 10 | 2 | 8 | 1 | 13 | 4 | 15 | 5 | 9 | 3 | 6 | 5 | 10 | 0 | — | 0 | 31 | 10 |
| | 600 | 4 | 8 | 2 | 6 | 3 | 8 | 4 | 7 | 1 | 13 | 0 | — | 2 | 8 | 6 | 11 | 4 | 14 | 1 | 10 | 3 | 12 | 0 | — | 1 | 31 | 9 |
| | 500 | 2 | 17 | 1 | 21 | 0 | — | 2 | 8 | 1 | 12 | 0 | — | 2 | 16 | 3 | 14 | 9 | 20 | 4 | 24 | 5 | 14 | 2 | 15 | 0 | 31 | 17 |
| | 400 | 2 | 21 | 1 | 8 | 0 | — | 0 | — | 0 | — | 1 | 2 | 0 | — | 3 | 28 | 9 | 37 | 6 | 34 | 6 | 18 | 3 | 18 | 0 | 31 | 27 |
| | 300 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 1 | 34 | 14 | 49 | 7 | 41 | 8 | 30 | 1 | 16 | 0 | 31 | 40 |
| | 200 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 14 | 56 | 11 | 55 | 5 | 30 | 0 | — | 0 | 30 | 52 |
| | 150 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 1 | 20 | 1 | 48 | 14 | 47 | 8 | 30 | 4 | 30 | 2 | 40 | 0 | 30 | 39 |
| | 100 | 0 | — | 1 | 4 | 1 | 6 | 0 | — | 0 | — | 2 | 16 | 0 | — | 6 | 26 | 8 | 26 | 4 | 38 | 3 | 14 | 1 | 9 | 0 | 26 | 23 |
| | 70 | 0 | — | 0 | — | 2 | 21 | 3 | 11 | 1 | 14 | 0 | — | 1 | 14 | 4 | 19 | 1 | 32 | 2 | 20 | 0 | — | 0 | — | 1 | 15 | 17 |
| | 60 | 1 | 9 | 0 | — | 2 | 8 | 1 | 10 | 1 | 7 | 1 | 19 | 1 | 9 | 3 | 15 | 1 | 17 | 2 | 10 | 0 | — | 0 | — | 0 | 13 | 13 |
| | 50 | 1 | 4 | 0 | — | 0 | — | 5 | 19 | 2 | 48 | 2 | 16 | 1 | 12 | 1 | 16 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | 12 | 21 |
| 40 | 0 | — | 2 | 15 | 2 | 20 | 1 | 22 | 3 | 21 | 0 | — | 1 | 8 | 0 | — | 0 | — | 1 | 22 | 0 | — | 0 | — | 0 | 10 | 18 | |
| 30 | 0 | — | 1 | 11 | 0 | — | 0 | — | 2 | 20 | 1 | 25 | 0 | — | 0 | — | 1 | 11 | 0 | — | 0 | — | 0 | — | 2 | 7 | 12 | |
| 20 | 0 | — | 0 | — | 0 | — | 2 | 21 | 0 | — | 0 | — | 1 | 6 | 0 | — | 0 | — | 1 | 11 | 0 | — | 0 | — | 0 | 4 | 15 | |
| 10 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | 0 | — | — | — | — | — | — | — | — | — | — | — | — | |

N — The number of cases the wind has been observed during the month.

TN — The total number of cases the wind has been observed for all directions during the month.

**Table B 3.(contd)—NUMBER OF OCCURRENCES OF WIND DIRECTION WITHIN SPECIFIED RANGES AND
THE MEAN SCALAR WIND SPEED AT THE STANDARD AND SELECTED PRESSURE SURFACES.
ASWAN (A) — OCTOBER 1964**

| Time | Pressure Surface (Millibar.) | Wind between specified ranges of direction (000-360)° | | | | | | | | | | | | | | | | Number of Calm winds | Total Number of Observations (T.N) | Mean Scalar wind Speed (Knots) | | | | | | | | | | |
|-----------|---------------------------------|---|------|-----------------|------|-----------------|------|-----------------|------|-----------------|------|-----------------|------|-----------------|------|-----------------|------|-------------------------|---------------------------------------|-----------------------------------|-----------------|------|-----------------|------|-----------------|------|-----------------|------|----|------|
| | | 045 / 014 | | 015 / 044 | | 045 / 074 | | 075 / 104 | | 105 / 134 | | 135 / 164 | | 165 / 194 | | 195 / 224 | | | | | 225 / 254 | | 255 / 284 | | 285 / 314 | | 315 / 344 | | | |
| | | N | (ff) | N | (ff) | N | (ff) | N | (ff) | N | (ff) | N | (ff) | N | (ff) | N | (ff) | | | | N | (ff) | N | (ff) | N | (ff) | N | (ff) | N | (ff) |
| | | m | m | m | m | m | m | m | m | m | m | m | m | m | m | m | m | | | | m | m | m | m | m | m | m | m | m | m |
| 0000 U.T. | Surface | 15 | 12 | 5 | 11 | 2 | 10 | 5 | 10 | 0 | — | 0 | — | 0 | — | 0 | — | 1 | 17 | 0 | — | 0 | — | 1 | 10 | 2 | 31 | 11 | | |
| | 1000 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | | |
| | 850 | 3 | 4 | 1 | 15 | 6 | 12 | 9 | 12 | 5 | 16 | 2 | 11 | 1 | 5 | 0 | — | 3 | 12 | 0 | — | 0 | — | 1 | 8 | 0 | 31 | 12 | | |
| | 700 | 1 | 4 | 4 | 13 | 3 | 13 | 5 | 13 | 4 | 12 | 2 | 10 | 0 | — | 1 | 14 | 8 | 13 | 1 | 7 | 1 | 8 | 0 | — | 1 | 31 | 12 | | |
| | 600 | 0 | — | 0 | — | 2 | 8 | 2 | 6 | 5 | 7 | 4 | 8 | 1 | 11 | 1 | 8 | 3 | 10 | 4 | 16 | 6 | 8 | 3 | 8 | 0 | 31 | 9 | | |
| | 500 | 0 | — | 2 | 20 | 2 | 10 | 3 | 8 | 1 | 3 | 1 | 6 | 3 | 8 | 3 | 9 | 2 | 7 | 8 | 13 | 4 | 14 | 2 | 22 | 0 | 31 | 12 | | |
| | 400 | 1 | 10 | 4 | 15 | 3 | 18 | 1 | 5 | 0 | — | 0 | — | 0 | — | 2 | 15 | 6 | 12 | 11 | 20 | 2 | 34 | 2 | 12 | 0 | 31 | 17 | | |
| | 300 | 4 | 13 | 3 | 10 | 1 | 12 | 0 | — | 0 | — | 0 | — | 1 | 13 | 4 | 29 | 6 | 28 | 6 | 34 | 3 | 42 | 3 | 28 | 0 | 31 | 26 | | |
| | 200 | 1 | 9 | 1 | 3 | 0 | — | 1 | 5 | 0 | — | 0 | — | 4 | 22 | 1 | 6 | 6 | 27 | 9 | 45 | 4 | 44 | 4 | 15 | 0 | 31 | 29 | | |
| | 150 | 2 | 10 | 0 | — | 0 | — | 0 | — | 0 | — | 2 | 18 | 2 | 30 | 4 | 33 | 8 | 33 | 6 | 31 | 1 | 28 | 4 | 12 | 0 | 29 | 28 | | |
| | 100 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 3 | 26 | 1 | 9 | 2 | 20 | 4 | 10 | 1 | 16 | 0 | — | 0 | 11 | 17 | | |
| | 70 | 0 | — | 3 | — | 1 | 25 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | 1 | 25 | 17 | |
| | 60 | 0 | — | 0 | — | 0 | — | 0 | — | 1 | 18 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | 1 | 25 | 17 | |
| | 50 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | 18 | |
| 40 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | | |
| 30 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | | |
| 20 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | | |
| 10 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | | |
| 1200 U.T. | Surface | 17 | 10 | 1 | 12 | 1 | 15 | 1 | 8 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 1 | 12 | 4 | 6 | 4 | 29 | 8 | | |
| | 1000 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | |
| | 850 | 3 | 10 | 5 | 7 | 5 | 8 | 1 | 7 | 0 | — | 3 | 4 | 2 | 8 | 1 | 12 | 0 | — | 1 | 14 | 3 | 6 | 5 | 12 | 0 | 29 | 8 | | |
| | 700 | 1 | 5 | 2 | 6 | 4 | 10 | 1 | 19 | 6 | 11 | 4 | 13 | 2 | 14 | 3 | 9 | 4 | 20 | 0 | — | 1 | 17 | 0 | — | 1 | 29 | 12 | | |
| | 600 | 2 | 4 | 3 | 7 | 3 | 9 | 4 | 12 | 2 | 15 | 3 | 11 | 0 | — | 2 | 16 | 5 | 13 | 2 | 8 | 2 | 8 | 0 | — | 1 | 29 | 10 | | |
| | 500 | 1 | 5 | 4 | 12 | 3 | 17 | 0 | — | 1 | 22 | 3 | 12 | 1 | 6 | 4 | 13 | 3 | 16 | 6 | 19 | 2 | 10 | 1 | 15 | 0 | 29 | 14 | | |
| | 400 | 1 | 8 | 5 | 21 | 0 | — | 1 | 27 | 0 | — | 0 | — | 1 | 21 | 2 | 14 | 7 | 21 | 5 | 24 | 3 | 29 | 3 | 16 | 1 | 29 | 20 | | |
| | 300 | 3 | 16 | 1 | 19 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 4 | 30 | 4 | 39 | 10 | 32 | 3 | 26 | 2 | 16 | 1 | 28 | 28 | | |
| | 200 | 0 | — | 1 | 18 | 0 | — | 0 | — | 1 | 50 | 1 | 37 | 1 | 32 | 6 | 36 | 2 | 43 | 9 | 42 | 4 | 40 | 3 | 14 | 0 | 28 | 26 | | |
| | 150 | 1 | 19 | 2 | 24 | 0 | — | 0 | — | 0 | — | 0 | — | 3 | 24 | 7 | 30 | 3 | 31 | 8 | 38 | 2 | 16 | 1 | 14 | 0 | 27 | 39 | | |
| | 100 | 0 | — | 0 | — | 0 | — | 3 | 25 | 0 | — | 0 | — | 0 | — | 2 | 20 | 0 | — | 2 | 12 | 1 | 20 | 1 | 18 | 0 | 9 | 20 | | |
| | 70 | 0 | — | 0 | — | 0 | — | 1 | 23 | 0 | — | 1 | 19 | 1 | 28 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | 3 | 33 | 23 | |
| | 60 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | |
| | 50 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | |
| 40 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | | |
| 30 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | | |
| 20 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | | |
| 10 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | | |

N = The number of cases the element has been observed during the month.

TN = The total number of cases the wind has been observed for all directions during the month.

REVIEW OF AGRO-METEOROLOGICAL STATIONS

EL-KASR — OCTOBER 1964

This month was dry during the first 10 days of the month, and rather humid for the rest of the month. Mist and fog occurred on some days.

The daily mean air temperature at 2 m. above ground was 21.6 C (0.5 °C below normal); the mean daily relative humidity was 4% above normal.

A marked warm spell started on 8th. and continued until the 10th. when it reached its peak (maximum air temperature was 35.4°C) . During this warm spell the highest values of evaporation from Pan class A and Piche both in the open air at levels 120, 60, 1 cms. occurred, also the highest maximum of soil temperature in dry field at depths 0.3, 1, 2, 3 cms took place on the 9 th., and for depths 5, 10, 20 cms on the 10 th

The 2 nd. heat wave was less marked than the 1 st. one. It prevailed between the 19 th. & 26 th. and reached its peak (31.9°C) on the 22 nd.

The most pronounced cold wave during the month started on the 11 th. with the peak on the 15 th. when the absolute minima of air temperature at 2 ms (13.2°C) and 5 cms (7.8°C) above ground level were observed ; also the absolute minima of soil temperature in dry field at depths 0.3, 1, 2, 3, 5 cms occurred on 15 th., but for depths 10, 20, 50 cms were observed on 28 th. For soil temperature at depths 100, 200 cms the absolute maximum occurred on the 1 st. and absolute minimum on 30 th. and 31 st.

The total actual duration of bright sunshine was 87% of the total possible duration with maximum on the 1 st. (11.0 hours) and minimum on the 29 th. (5.2 hours). The total rainfall was zero (-11.9 mms below normal).

TAHRIR — OCTOBER 1964

This month had the usual autumn weather, with frequent mist and fog at night and in the morning. Two distinct heat waves occurred, with their peaks on the 11 th. and 25th., and no rainfall occurred.

This month was relatively cool and dry when compared with the previous October. Mean relative humidity and vapour pressure were also less by 4% and 1.1 mms respectively. Total global radiation and total sunshine duration were more than those of last October by 1400 cal./cm² and 23.3 hours or about 7% of the possible sunshine duration respectively. On the other hand mean wind speed at 2 m. was less by 0.4 m per second.

The effect of lower mean air temperature and wind speed on evaporation outweighed that of higher radiation values, resulting in diminishing the value of mean evaporation for the Piche by 2.3 mms, and for Pan A by 1.70 mms.

The relation between extreme soil temperatures down to 1 m. of the two months reflect the relation of the extreme air temperatures. Thus the extreme maxima were less at all depths by amounts ranging from 3.9 to 1.4°C, while the minima were higher by 1.9 to 0.3°C down to 50 cms. At the depths of one metre the extreme minimum became less than that of last October by 0.1 °C.

GIZA — OCTOBER 1964

The month was normal with regard to air temperature and relative humidity.

The mean daily values of air temperature and relative humidity at 2 metres above ground were the normal values for October, while total rainfall was 3 mms below normal. The month started with a cold spell which continued till the 8th. This spell was followed by a prolonged moderate heat wave which continued till the end of the month and reached its peak on the 22 nd. when the absolute maximum temperature for the month (34.7°C) and the lowest relative humidity (15%) were reported.

The extreme maximum soil temperature at all depths in the different fields were lower than the corresponding values of October 1963. In the dry field the deviation was in the range 4.2°C at 0.3 cm depth and 0.3°C at 2 cms depth. The extreme minimum soil temperatures at depths down to 20 cms in the different fields were higher than the corresponding values of last October while at 50 and 100 cms depths the values were generally lower than the corresponding values of October 1963. In the dry field the deviation was in the range +2.3°C at 0.3 cm depth and -0.6°C at 100 cms depth.

The daily mean wind speed at 2 metres above ground was higher by 0.6 m/sec than the corresponding value of last October. The daily mean values of Piche evaporation, class A pan evaporation and potential evapotranspiration were lower than the corresponding values of October 1963 by 1.1, 0.29 and 0.7 mms respectively ; while the mean values of potential evaporation was 0.5 mm higher than the corresponding value of last October. The total actual duration of bright sunshine was 14.7 hours higher than the corresponding value of October 1963.

KHARGA — OCTOBER 1964

Compared with the normal values of October, this month is rather normal, with respect to air temperature but sharply drier.

It began with a cold spell with the peak on the 5th. when the lowest value of maximum air temperature was recorded 29.4°C (-5.3°C below normal) which led to the lowest day time mean temperature, the highest daily mean relative humidity and the lowest evaporation from Pan class A, Piche in free air at different heights and in the screen.

The month was characterized by a prolonged warm spell which was experienced between the 9th and the end of the month and reached its peak on the 17th, when the absolute maximum value of air temperature at 200 cms 39.8°C (6.6°C above normal) was recorded which led to the maximum value of soil temperature up to 10 cms on the same day. The maximum value of soil temperature at depth 20 cms was recorded on the 18th, while that for 50 cms was recorded on the 1st, 20th and 21st, for larger depths, the maximum values were recorded on the beginning of the month. On the 22nd and 23rd, both the lowest values of mean surface wind speed at 50 and 100 cms and relative humidity 7% were recorded. Lowest values of mean surface wind speed at 200 and 300 cms height were recorded on the 28th.

On the 31st the absolute minimum of air temperature at 5 cms, 20 cms above ground surface and 200 cms in the screen (11.2°C) and the absolute minimum values of soil temperature at different depths were all recorded.

The absolute minimum values of soil temperatures at 0.3 and 1 cm were recorded on the 26th.

The actual duration of bright sunshine was 94.3% of the possible duration.

The means of the maximum, minimum and daily mean air temperatures were different from normal by 1.2°C , -1.8°C and 0.5°C respectively.

The daily mean relative humidity was 16 % lower than normal.

Table C 1.—AIR TEMPERATURE AT 2 METRES ABOVE GROUND

OCTOBER — 1964

| STATION | Air Temperature (°C) | | | | | Mean Duration in hours of daily air temperature above the following values | | | | | | | | | | |
|-------------------|----------------------|-----------|-----------------|-----------------|---------------|--|------|------|------|------|------|------|------|------|------|------|
| | Mean Max. | Mean Min. | Mean of the day | Night time mean | Day time mean | —5°C | 0°C | 5°C | 10°C | 15°C | 20°C | 25°C | 30°C | 35°C | 40°C | 45°C |
| El Kasr | 27.4 | 16.8 | 21.6 | 19.4 | 24.1 | 24.0 | 24.0 | 24.0 | 24.0 | 23.0 | 16.7 | 4.5 | 0.4 | 0.0 | 0.0 | 0.0 |
| Tahrir | 30.7 | 15.7 | 22.2 | 19.2 | 25.4 | 24.0 | 24.0 | 24.0 | 24.0 | 23.6 | 13.6 | 7.8 | 1.7 | 0.0 | 0.0 | 0.0 |
| Giza | 31.3 | 16.7 | 23.3 | 21.1 | 25.7 | 24.0 | 24.0 | 24.0 | 24.0 | 23.8 | 15.7 | 8.9 | 2.3 | 0.0 | 0.0 | 0.0 |
| Kharga | 35.2 | 16.8 | 26.4 | 23.3 | 30.6 | 24.0 | 24.0 | 24.0 | 24.0 | 23.5 | 20.4 | 13.8 | 7.0 | 2.4 | 0.0 | 0.0 |

Table C 2.—ABSOLUTE VALUES OF AIR TEMPERATURE AT 2 METRES ABOVE GROUND, ABSOLUTE MINIMUM AIR TEMPERATURE AT 5cms ABOVE GROUND OVER DIFFERENT FIELDS.

OCTOBER — 1964

| STATION | Max. Temp. at 2 metres (°C) | | | | Min. Temp. at 2 metres (°C) | | | | Min. Temp. at 5 cms. above (°C) | | | |
|-------------------|-----------------------------|------|--------|-------|-----------------------------|--------|--------|------|---------------------------------|------|-------|------|
| | Highest | | Lowest | | Highest | | Lowest | | Dry soil | | Grass | |
| | Value | Date | Value | Date | Value | Date | Value | Date | Value | Date | Value | Date |
| El Kasr | 35.4 | 10 | 24.4 | 7 | 21.1 | 10 | 13.2 | 15 | 7.8 | 15 | — | — |
| Tahrir | 34.0 | 11 | 28.1 | 2, 31 | 18.6 | 16 | 13.2 | 19 | 11.1 | 9 | — | — |
| Giza | 34.7 | 22 | 28.5 | 1 | 20.4 | 16, 17 | 13.1 | 31 | 8.0 | 23 | 5.0 | 23 |
| Kharga | 39.8 | 17 | 29.4 | 5 | 23.0 | 11 | 11.2 | 31 | 8.8 | 31 | — | — |

Table C 3.—(SOLAR+SKY) RADIATION, DURATION OF BRIGHT SUNSHINE, RELATIVE HUMIDITY, VAPOUR PRESSURE AT 2 METRES ABOVE GROUND, EVAPORATION & RAINFALL

OCTOBER — 1964

| STATION | (Solar + Sky) Radia- tion gm. cal/cm ² | Duration of Bright Sunshine (hours) | | | Relative Humidity | | | | | | Vapour pressure (mm) | | | | | | Evaporation (mm) | | Rainfall (mm) | | |
|----------|--|--|---------------------------|----|----------------------|------|-------------|-----------|--------|--------|----------------------|-----------|---------|------|--------|------|---------------------|-------------|-------------------------|-------------------------|------|
| | | Total Actual monthly | Total Possible monthly | % | Duration in hours | | Mean of day | 1200 U.T. | Lowest | Date | Mean of day | 1200 U.T. | Highest | Date | Lowest | Date | Piche | Pan class A | Total Amount Monthly | Max. Fall in one day | Date |
| | | | | | | | | | | | | | | | | | | | | | |
| | | | | | 90 | 80 | | | | | | | | | | | | | | | |
| El Kasr. | 366.0 | 309.3 | 353.7 | 87 | — | — | 75 | 63 | 20 | 22 | 14.6 | 15.7 | 20.0 | 13 | 6.2 | 22 | 9.8 | 6.98 | 0.0 | — | — |
| Tahrir . | 475.4 | 290.0 | 354.3 | 82 | 7.2 | 11.0 | 72 | 37 | 19 | 25 | 13.6 | 11.7 | 18.2 | 21 | 7.0 | 25 | 10.3 | 6.42 | 0.0 | — | — |
| Giza . . | 404.8 | 299.1 | 354.6 | 84 | 3.6 | 8.0 | 65 | 36 | 15 | 22, 23 | 13.2 | 11.3 | 18.1 | 21 | 5.2 | 23 | 12.2 | 7.24 | 0.0 | — | — |
| Kharga | 472.7 | 338.2 | 358.6 | 94 | 0 | 0 | 28 | 16 | 7 | 22, 23 | 6.7 | 6.3 | 12.6 | 7 | 2.5 | 24 | 28.9 | 13.67 | 0.0 | — | — |

**PRINTED IN A.R.E. BY
THE GENERAL ORGANIZATION
FOR GOVT. PRINTING OFFICES. CAIRO
ALY SULTAN ALY
UNDER-SECRETARY OF STATE
*Chairman of the Board of Directors***



THE ARAB REPUBLIC OF EGYPT

MONTHLY WEATHER REPORT

VOLUME 7

NUMBER 11

NOVEMBER, 1964

U.D.C. 551.508.1 (82)

METEOROLOGICAL DEPARTMENT
CAIRO

JAN 17 1972

ATMOSPHERIC SCIENCES
LIBRARY

PUBLICATIONS OF THE METEOROLOGICAL DEPARTMENT OF THE ARAB REPUBLIC OF EGYPT — CAIRO

In fulfilment of its duties, the Meteorological Department of Egypt issues several reports and publications on weather, climate and agrometeorology. The principal publications are described on this page.

Orders for publications should be addressed to :
"The Director General, Meteorological Department, Kubri-el-Qubbeh — CAIRO".

THE DAILY WEATHER REPORT

This report is issued daily by the Meteorological Department since the year 1901. It includes surface and upper air observations carried out by the relevant networks of the Republic at the principal hours of observations.

As from January 1968 this report was revised to include a condensed representative selection of surface and upper air observations besides the 1200 U.T. surface & 500 mb charts.

THE MONTHLY WEATHER REPORT

First issued in 1909, the Monthly Weather Report served to give a brief summary of the weather conditions that prevailed over Egypt during the month, with a table showing the mean values for few meteorological elements and their deviations from the normal values. From 1954 to 1957 this report was in a rapid state of development and extension resulting into a voluminous report on January 1958 giving surface, upper air, and agro-meteorological data for Egypt.

As from January 1964, the Monthly Weather Report was pressed to give climatological data for a representative selection of synoptic stations.

THE AGRO-METEOROLOGICAL ABRIDGED MONTHLY REPORT

Gives a review of weather experienced in the agro-meteorological stations of Egypt as well as monthly values of certain elements.

THE ANNUAL REPORT

This report gives annual values and statistics for the various meteorological elements, together with a summary of the weather conditions that prevailed during all months of the year.

CLIMATOLOGICAL NORMALS FOR EGYPT

A voluminous edition was issued in march 1968 which brings normals and mean values up till 1960.

METEOROLOGICAL RESEARCH BULLETIN

First issued in January 1969 on a bi-annual basis. It includes research works carried out by members of staff of "The Meteorological Institute for Research and Training" and the Operational Divisions of Meteorological Department.

TECHNICAL NOTES

As from October 1970, the Meteorological Department started to issue a new series of publications in the form of Technical Notes (non periodical) on subjects related to studies and applications of meteorology in different fields for the benefit of personnel working in these fields.

The first Technical Note I was issued in October 1970 on : Sandstorms & Duststorms in Egypt.



THE ARAB REPUBLIC OF EGYPT

MONTHLY WEATHER REPORT

VOLUME 7

NUMBER 11

NOVEMBER, 1964

U.D.C. 551. 506.1 (62)

**METEOROLOGICAL DEPARTMENT
CAIRO**

CONTENTS

| | PAGE |
|---|------|
| General Summary of Weather Conditions | 1,2 |

SURFACE DATA

| | |
|--|-----|
| Table A1.—Monthly values of the Atmospheric Pressure, Air Temperature, Relative Humidity, Bright Sunshine Duration and Piche Evaporation | 3 |
| „ A2.—Maximum and Minimum Air Temperatures | 4 |
| „ A3.—Sky Cover and Rainfall | 5 |
| „ A4.—Number of Days of Occurrence of Miscellaneous Weather Phenomena | 6 |
| „ A5.—Number in Hours of Occurrences of Concurrent Surface Wind Speed and Direction Recorded Within Specified Ranges | 7,8 |

UPPER AIR DATA

| | |
|--|-------|
| Table B1.—Monthly Means and Monthly Absolute Higher & Lower Values of Altitude, air Temperature & Dew point at Standard and Selected Pressure Surfaces | 9,10 |
| „ B2.—Mean and Extreme values of The Freezing Level and The Tropopause; The Highest Wind Speed in The Upper Air | 11 |
| „ B3.—Number of Occurrences of Wind Direction Within Specified Ranges and The Mean Scalar Wind Speed at the Standard and Selected Pressure Surfaces | 12-14 |

AGRO-METEOROLOGICAL DATA

| | |
|--|-------|
| Reviews of Agro-meteorological stations | 15-17 |
| Table C1.—Air Temperature at 2 Metres Above Ground | 18 |
| „ C2.—Absolute Values of Air Temperature at 2 Metres Above Ground, Absolute Minimum Air Temperature at 5 Cms Above Ground Over Different Fields. | 18 |
| „ C3.—(Solar + Sky) Radiation, Duration of Bright Sunshine, Relative Humidity and Vapour Pressure at 2 Metres Above Ground, Evaporation and Rainfall | 18 |
| „ C4.—Extreme Soil Temperature at Different Depths in Different Fields | 19 |
| „ C5.—Surface wind | 19 |

Note : For explanatory notes on the tables please refer to Volume 7, Number 1 (January 1964).

GENERAL SUMMARY OF WEATHER CONDITIONS

NOVEMBER 1964

Mild in the northern parts, hot elsewhere during the 1st half of the month; cold in general during the 2nd half; rainy and occasionally thundery between 16th and 27th. Frequent early morning mist over Delta, Canal and Cairo areas

GENERAL DESCRIPTION OF WEATHER

The prevailing weather was generally mild in the northern parts, and markedly hot elsewhere most of the 1st half of the month. The second half was generally cold, rainy and occasionally thundery in the northern parts between the 16th & 27th. Daily rain was light/moderate in general but heavy over scattered localities where the monthly rain accordingly exceeded its normal. On the 16th rain penetrated southwards through middle and southern parts.

Widespread rising sand & sandstorms associated the active cold front on the 20th. Frequent early morning mist & fog developed over scattered localities of Delta, Canal & Cairo areas.

PRESSURE DISTRIBUTION

The prevailing pressure distribution over the surface map this month can be summarized in the following pressure systems.

- The anticyclonic ridge over the Black & Caspian seas vicinities.
- The anticyclonic ridge over west Europe & Northwest Africa.
- Shallow troughs of low pressure over Sudan and the great Sahara of Africa.
- The deep Atlantic transitory low pressure systems through Europe & Russia and their attached secondaries.

On the other hand the prevailing upper pressure systems at the 700 & 500 mb levels were confined in the two deep upper lows over north Atlantic and north Russia, their extended upper troughs southwards towards Mediterranean vicinities and the high pressure belt prevailing between latitudes 35°N & 10°N.

Secondary Mediterranean depressions were few this month, and were confined in a central Mediterranean shallow secondary on the 1st, and a rather deep west Mediterranean secondary depression on the 5th.

The first Mediterranean secondary depression proceeded rapidly eastwards and reached east Mediterranean on the 4th where it filled up.

The second Mediterranean secondary depression deepened rapidly while was stationary till the 7th, then proceeded eastwards while slightly filling. On the 12th it passed Central Mediterranean, and by the 14th it reached Cyprus. On the 15th it moved eastwards, but east Mediterranean and northern vicinities were area of loose pressure gradient as a result of a marked approach of a deep transitory northern low pressure system from Black Sea. By the 19th the attached active (polar) cold front traversed Asia Minor, and accordingly Cyprus depression reformed on the 20th, then started filling gradually at the rear of the cold front while was stationary. On the 24th it proceeded eastward by the approach of a second deep northern low pressure system from the Black Sea vicinities.

High pressure on the other hand operated over Asia Minor & east Mediterranean round periods (1st - 3rd), (5th - 12th) & (27th - 30th).

It is worth to mention that the barometric pressure over Egypt experienced three oscillations with its minima on the 4th, 14th, 20th; the minimum on the 20th was the most pronounced.

Round 180 mb level the subtropical jet stream was evident over Egypt most of the days of the month, while the polar jet stream was evident north of latitude 32°N round 260 mb level in association with the travelling Mediterranean depressions.

The highest wind speeds recorded at Mersa Matruh, Helwan & Aswan were 130, 140 & 150 knots round the 20th, 23rd & 28th respectively.

SURFACE WIND

The prevailing winds were Nly and NEly, light/moderate in general, but occasionally fresh over few scattered localities. As an exception Wly winds blew during the period (16th - 26th) and were moderate/fresh in general but occasionally strong particularly over the northern parts.

Gales were reported at : Sidi Barrani on the 19th & 20th; Dekheila on the 19th and at Mersa Matruh, Dabaa, Ras El Teen, Alexandria, Balteam, Ghazza, Abu Sueir & Fayed on the 20th.

Cairo, September 1971

TEMPERATURE

Maximum temperature was rather abnormal most of the first half particularly during the second week, when it was markedly above normal. During the second half of the month maximum temperature was appreciably subnormal.

The absolute maximum temperature for the Republic was 38.3°C reported at Aswan on the 2nd.

Minimum temperature oscillated slightly round normal over the northern & middle parts. Over the southern parts it was mostly subnormal.

The absolute minimum temperature for the Republic was 2.8°C reported at Dakhla on the 23rd.

PRECIPITATION

Rain fell over scattered localities of the northern parts between the 16th & 27th. It penetrated inland on the 16th through the middle & southern parts. Daily rain was light/moderate in general, but heavy over scattered localities where the monthly rain accordingly exceeded its normal.

The absolute daily rainfall was 77.5 mms reported at Rosetta L.H. on the 19th. The absolute monthly rainfall for the Republic was 122.5 mms reported also at Rosetta L.H.

M. F. TAHA

Under Secretary of State

Director General

Meteorological Department

SURFACE DATA

**Table A 1.—MONTHLY VALUES OF THE ATMOSPHERIC PRESSURE, AIR TEMPERATURE,
RELATIVE HUMIDITY, BRIGHT SUNSHINE DURATION & PICHE EVAPORATION
NOVEMBER — 1964**

| STATION | Atmospheric Pressure (mbs) M.S.L | | Air Temperature °C | | | | | | | | | Relative Humidity % | | Bright Sunshine Duration (Hours) | | | Piche Evaporation mm. Mean |
|---------------------|-------------------------------------|------------------------|--------------------|------------------------|----------|------------------------|-----------------|----------|------------------------|----------|------------------------|---------------------|------------------------|----------------------------------|----------------|------|-------------------------------|
| | | | Maximum | | Minimum | | $\frac{A+B}{2}$ | Dry Bulb | | Wet Bulb | | | | | | | |
| | Mean | D.F. Normal or Average | (A) Mean | D.F. Normal or Average | (B) Mean | D.F. Normal or Average | | Mean | D.F. Normal or Average | Mean | D.F. Normal or Average | Mean | D.F. Normal or Average | Total Actual | Total Possible | % | |
| Sallum | 1017.7 | +0.5 | 24.3 | +0.2 | 15.1 | -0.8 | 19.7 | 19.2 | -0.7 | 14.7 | -0.7 | 59 | - 1 | — | — | — | 6.7 |
| Mersa Matruh (A) | 1017.9 | +0.5 | 23.2 | -0.2 | 13.3 | 0.0 | 18.2 | 17.7 | -0.5 | 14.5 | -0.2 | 68 | + 2 | 233.3 | 317.2 | 73.5 | 7.2 |
| Alexandria . . (A) | 1017.3 | +0.4 | 24.2 | -0.2 | 13.3 | -1.5 | 18.8 | 18.4 | -0.9 | 15.3 | -0.8 | 70 | - 2 | 256.8 | 318.0 | 80.8 | 4.9 |
| Port Said . . (A) | 1016.8 | +0.4 | 23.7 | -0.4 | 17.5 | -0.9 | 20.6 | 20.1 | -0.8 | 16.7 | -0.9 | 69 | - 3 | 244.1 | 318.0 | 73.6 | 5.6 |
| El Arish | 1017.1 | 0.0 | 24.1 | -1.1 | 14.1 | -0.2 | 19.1 | 18.5 | -1.2 | 15.8 | -0.8 | 74 | + 4 | 233.9 | 317.2 | 73.7 | 5.4 |
| Ghazza | 1016.5 | -0.2 | 22.9 | -1.3 | 14.1 | -0.7 | 18.5 | 18.4 | -1.2 | 15.4 | -0.4 | 71 | + 1 | 209.1 | 317.2 | 65.9 | 5.0 |
| Tanta | 1016.7 | — | 24.6 | — | 12.7 | — | 18.6 | 17.8 | — | 14.4 | — | 67 | — | — | — | — | 3.4 |
| Cairo (A) | 1017.0 | +0.1 | 24.9 | -0.2 | 14.0 | +0.1 | 19.4 | 19.0 | -0.3 | 14.3 | 0.7 | 57 | - 4 | — | — | — | 10.9 |
| Fayoum | 1017.1 | — | 26.2 | — | 12.4 | — | 19.3 | 18.5 | — | 14.2 | — | 60 | — | — | — | — | 5.3 |
| Minya (A) | 1017.5 | +1.1 | 26.9 | +0.1 | 9.4 | -2.2 | 18.2 | 18.0 | -0.4 | 13.7 | -0.3 | 59 | 0 | — | — | — | 6.1 |
| Assyout (A) | 1017.3 | +1.1 | 25.8 | -0.8 | 12.3 | -0.6 | 19.0 | 18.6 | -0.8 | 12.7 | -0.8 | 46 | - 2 | — | — | — | 9.8 |
| Luxor (A) | 1015.9 | +1.5 | 30.3 | +0.7 | 11.1 | -1.2 | 20.7 | 20.0 | +0.7 | 13.4 | -1.6 | 43 | - 4 | — | — | — | 6.7 |
| Aswan (A) | 1016.8 | +1.6 | 29.8 | -1.6 | 14.2 | -2.3 | 22.0 | 21.6 | +1.1 | 12.9 | -0.7 | 30 | 0 | — | — | — | 12.1 |
| Siwa | 1018.2 | +0.4 | 24.9 | -1.4 | 9.7 | +0.4 | 17.3 | 17.2 | -1.0 | 12.3 | -0.4 | 53 | + 3 | — | — | — | 6.7 |
| Bahariya | 1017.1 | +0.3 | 26.5 | -0.3 | 11.1 | -0.6 | 18.8 | 18.6 | +0.5 | 12.5 | -1.3 | 45 | - 6 | — | — | — | 6.6 |
| Farafra | 1019.4 | — | 25.8 | — | 9.2 | — | 17.5 | 17.2 | — | 11.1 | — | 42 | — | — | — | — | 9.2 |
| Dakhla | 1016.1 | +1.1 | 27.2 | -0.5 | 8.6 | -3.2 | 17.9 | 17.8 | -1.4 | 11.1 | -0.9 | 38 | + 1 | — | — | — | 10.9 |
| Kharga | 1017.2 | — | 28.3 | — | 12.4 | — | 20.4 | 20.5 | — | 12.4 | — | 32 | — | 310.7 | 328.4 | 94.6 | 14.4 |
| Tor | 1016.1 | +1.5 | 25.6 | -1.1 | 13.8 | -0.8 | 19.7 | 20.0 | -1.0 | 15.1 | -0.8 | 56 | + 0 | — | — | — | 6.4 |
| Hurghada | 1016.0 | +1.5 | 26.1 | +0.4 | 13.8 | -1.7 | 20.0 | 20.1 | -0.7 | 14.4 | -1.4 | 50 | - 6 | — | — | — | 12.5 |
| Quseir | 1016.2 | +2.1 | 26.0 | -1.4 | 17.9 | -1.6 | 22.0 | 21.9 | -1.6 | 16.2 | -1.4 | 52 | - 1 | — | — | — | 12.6 |

TABLE A 2.—MAXIMUM AND MINIMUM AIR TEMPERATURES

NOVEMBER — 1964

| STATION | Maximum Temperature °C | | | | | | | | | Grass Min. Temp. | | Minimum Temperature °C | | | | | | | | |
|--------------------------|------------------------|------|--------|------------|----------------------------|-----|-----|-----|-----|------------------|----------------|------------------------|------|--------|--------|-----------------------------|-----|-----|-------|--|
| | Highest | Date | Lowest | Date | No. of Days with Max-Temp. | | | | | Mean | D. From Normal | Highest | Date | Lowest | Date | No. of Days with Min. Temp. | | | | |
| | | | | | | | | | | | | | | | | | | | | |
| | | | | | >25 | >30 | >35 | >40 | >45 | | | | | | | <10 | < 5 | < 0 | < - 5 | |
| Sallum | 34.0 | 12 | 18.3 | 20 | 11 | 1 | 0 | 0 | 0 | 10.4 | — | 20.6 | 1 | 11.6 | 22 | 0 | 0 | 0 | 0 | |
| Mersa Matruh. . . . (A) | 32.4 | 12 | 18.0 | 21, 22, 24 | 8 | 1 | 0 | 0 | 0 | — | — | 19.4 | 1 | 10.0 | 21 | 0 | 0 | 0 | 0 | |
| Alexandria (A) | 32.0 | 13 | 17.0 | 20 | 15 | 1 | 0 | 0 | 0 | — | — | 17.5 | 1 | 10.2 | 29 | 0 | 0 | 0 | 0 | |
| Port Said (A) | 30.6 | 12 | 15.6 | 21 | 11 | 1 | 0 | 0 | 0 | 11.2 | — | 22.2 | 10 | 12.1 | 21 | 0 | 0 | 0 | 0 | |
| El Arish | 34.3 | 12 | 17.7 | 21 | 14 | 2 | 0 | 0 | 0 | 12.2 | — | 21.6 | 15 | 10.2 | 29 | 0 | 0 | 0 | 0 | |
| Ghazsa | 31.7 | 14 | 18.0 | 22 | 2 | 2 | 0 | 0 | 0 | 13.6 | — | 18.0 | 16 | 10.3 | 30 | 0 | 0 | 0 | 0 | |
| Tanta | 32.7 | 13 | 13.6 | 21 | 16 | 2 | 0 | 0 | 0 | — | — | 16.2 | 11 | 8.5 | 28 | 3 | 0 | 0 | 0 | |
| Cairo (A) | 34.7 | 12 | 17.3 | 22 | 14 | 4 | 0 | 0 | 0 | — | — | 17.4 | 15 | 10.8 | 30 | 0 | 0 | 0 | 0 | |
| Fayoum | 32.4 | 12 | 20.3 | 20 | 17 | 5 | 0 | 0 | 0 | 10.1 | — | 15.5 | 4 | 8.0 | 21 | 6 | 0 | 0 | 0 | |
| Minya (A) | 35.2 | 12 | 20.5 | 21 | 17 | 7 | 1 | 0 | 0 | 7.4 | — | 15.0 | 1 | 6.3 | 21 | 8 | 0 | 0 | 0 | |
| Assyout (A) | 34.0 | 12 | 19.2 | 21 | 16 | 4 | 0 | 0 | 0 | 9.5 | — | 16.5 | 4 | 8.0 | 23 | 7 | 0 | 0 | 0 | |
| Luxor (A) | 26.0 | 11 | 21.4 | 21 | 22 | 16 | 3 | 0 | 0 | — | — | 17.8 | 5 | 5.2 | 23 | 12 | 0 | 0 | 0 | |
| Aswan (A) | 38.3 | 2 | 21.0 | 23 | 20 | 16 | 8 | 0 | 0 | — | — | 18.8 | 4 | 7.0 | 22 | 9 | 0 | 0 | 0 | |
| Siwa | 33.3 | 12 | 19.2 | 20 | 13 | 2 | 0 | 0 | 0 | 8.0 | — | 15.7 | 2 | 5.0 | 22 | 16 | 0 | 0 | 0 | |
| Bahariya | 36.5 | 12 | 19.8 | 21 | 16 | 5 | 3 | 0 | 0 | 9.7 | — | 15.8 | 9 | 5.9 | 22 | 6 | 0 | 0 | 0 | |
| Farafra | 34.9 | 13 | 19.5 | 21 | 15 | 5 | 0 | 0 | 0 | 8.7 | — | 13.6 | 2 | 5.3 | 22 | 19 | 0 | 0 | 0 | |
| Dakhla | 37.2 | 11 | 20.4 | 21 | 16 | 7 | 3 | 0 | 0 | 4.2 | — | 15.7 | 4 | 2.8 | 23 | 18 | 4 | 0 | 0 | |
| Kharga | 36.5 | 11 | 19.0 | 24 | 19 | 11 | 4 | 0 | 0 | 10.6 | — | 20.4 | 10 | 5.8 | 22, 23 | 12 | 0 | 0 | 0 | |
| Tor | 30.0 | 4 | 20.8 | 22 | 19 | 0 | 0 | 0 | 0 | — | — | 17.1 | 5 | 10.1 | 30 | 0 | 0 | 0 | 0 | |
| Hurghada | 30.9 | 13 | 21.6 | 25 | 19 | 1 | 0 | 0 | 0 | 12.8 | — | 17.8 | 5 | 9.2 | 23 | 2 | 0 | 0 | 0 | |
| Quesir | 29.2 | 10 | 22.0 | 22 | 18 | 0 | 0 | 0 | 0 | 15.5 | — | 21.0 | 5 | 13.5 | 22 | 0 | 0 | 0 | 0 | |

TABLE A 3.—SKY COVER AND RAINFALL

NOVEMBER — 1964

| Station | Mean Sky Cover (Oct) | | | | | Rainfall (mm) | | | | | | | | | | |
|----------------------------|----------------------|------|------|------|-------|-----------------|---------------------|-------------------------|--------|------------------------------------|------|------|------|-----|-----|-----|
| | 00 | 06 | 12 | 18 | Daily | Total Amount | Dev. From Normal | Max. Fall in one day | | Number of days with Amount of Rain | | | | | | |
| | U.T. | U.T. | U.T. | U.T. | Mean | | | Amount | Date | <0.1 | ≥0.1 | ≥1.0 | ≥5.0 | ≥10 | ≥25 | ≥50 |
| | | | | | | | | | | | | | | | | |
| Sallum | 2.9 | 3.7 | 4.4 | 3.5 | 3.4 | 3.8 | -35.9 | 1.5 | 17 | 0 | 5 | 2 | 0 | 0 | 0 | 0 |
| Marss Matruh (A) | 2.6 | 3.8 | 3.9 | 2.1 | 2.9 | 28.8 | + 2.1 | 10.9 | 23 | 1 | 9 | 5 | 3 | 1 | 0 | 0 |
| Alexandria (A) | 3.4 | 4.2 | 3.8 | 3.2 | 3.6 | 60.4 | +28.0 | 18.5 | 19 | 1 | 8 | 7 | 5 | 2 | 0 | 0 |
| Port Said (A) | 2.2 | 2.9 | 2.8 | 1.6 | 2.2 | 15.5 | + 6.4 | 8.1 | 18 | 0 | 6 | 4 | 1 | 0 | 0 | 0 |
| El Arish | 4.1 | 4.1 | 3.8 | 3.3 | 3.0 | 11.7 | - 6.6 | 5.2 | 17 | 0 | 5 | 4 | 1 | 0 | 0 | 0 |
| Ghazma | 2.3 | 3.8 | 3.9 | 2.3 | 2.5 | 75.4 | +40.0 | 27.7 | 17 | 1 | 10 | 8 | 5 | 3 | 1 | 0 |
| Tanta | — | 2.3 | 2.6 | 0.9 | — | 7.8 | + 3.2 | 3.5 | 16 | 0 | 6 | 3 | 0 | 0 | 0 | 0 |
| Cairo (A) | 2.3 | 3.2 | 3.4 | 2.2 | 2.8 | 2.0 | - 1.5 | 1.0 | 16, 19 | 3 | 2 | 2 | 0 | 0 | 0 | 0 |
| Fayoum | — | 1.0 | 1.6 | 1.0 | — | Tr. | - 0.6 | Tr. | 16 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| Minya (A) | 0.8 | 0.9 | 1.8 | 0.9 | 0.8 | Tr. | - 0.2 | Tr. | 16 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| Assyout (A) | 0.4 | 0.9 | 1.1 | 0.5 | 0.7 | 0.0 | 0.0 | 0.0 | — | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Luxor (A) | 0.3 | 0.5 | 0.7 | 0.3 | 0.6 | 1.0 | + 0.9 | 1.0 | 17 | 0 | 1 | 1 | 0 | 0 | 0 | 0 |
| Aswan (A) | 0.4 | 0.9 | 1.0 | 0.9 | 0.8 | Tr. | - 0.1 | Tr. | 16 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| Siva | 0.8 | 1.0 | 2.0 | 1.4 | 1.5 | 0.0 | - 0.2 | 0.0 | — | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Bahariya | 1.0 | 1.2 | 1.8 | 0.9 | 1.2 | 0.1 | - 0.6 | 0.1 | 16 | 0 | 1 | 0 | 0 | 0 | 0 | 0 |
| Farafra | 0.4 | 0.9 | 1.7 | 0.9 | 1.1 | 0.6 | + 0.6 | 0.6 | 16 | 0 | 1 | 0 | 0 | 0 | 0 | 0 |
| Dakhla | 0.1 | 0.1 | 0.7 | 0.3 | 0.4 | 0.0 | - Tr. | 0.0 | — | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Kharga | 0.5 | 0.6 | 0.9 | 0.5 | 0.2 | 2.1 | + 2.0 | 2.1 | 16 | 0 | 1 | 1 | 0 | 0 | 0 | 0 |
| Tor | 1.2 | 1.3 | 1.2 | 0.7 | 1.1 | Tr. | - 0.8 | Tr. | 3 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| Hurgada | 0.1 | 1.0 | 1.0 | 0.2 | 0.6 | 0.0 | - 0.2 | 0.0 | — | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Quseir | 0.4 | 1.0 | 1.0 | 0.5 | 0.8 | Tr. | - 2.2 | Tr. | 16 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |

TABLE A 4—DAYS OF OCCURRENCE OF MISCELLANEOUS WEATHER PHENOMENA.

NOVEMBER—1964

| Station | Precipitation | | | | Frost | Thunderstorm | Mist Vis ≥ 1000 metres | Fog Vis < 1000 Metres | Haze Vis ≥ 1000 Metres | Thick Haze Vis < 1000 Metres | Dust or Sandrising Vis ≥ 1000 Metres | Dust or Sandstorm Vis < 1000 Metres | Gale | Clear Sky | Cloudy Sky |
|----------------------------|---------------|------|----------------|------|-------|--------------|---------------------------|--------------------------|---------------------------|---------------------------------|---|--|------|--------------|---------------|
| | Rain | Snow | Ice Pellets | Hail | | | | | | | | | | | |
| Sallum | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 2 | 2 | 0 | 8 | 1 |
| Mersa Matruh (A) | 9 | 0 | 0 | 0 | 0 | 2 | 2 | 1 | 0 | 0 | 3 | 3 | 1 | 9 | 0 |
| Alexandria (A) | 8 | 0 | 0 | 1 | 0 | 3 | 6 | 6 | 0 | 0 | 1 | 0 | 1 | 6 | 7 |
| Port Said (A) | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 13 | 2 |
| El Arish | 5 | 0 | 0 | 0 | 0 | 1 | 6 | 2 | 2 | 0 | 0 | 0 | 0 | 6 | 5 |
| Ghazza | 10 | 0 | 0 | 0 | 0 | 2 | 1 | 2 | 0 | 0 | 1 | 0 | 1 | 11 | 5 |
| Tanta | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | — | — |
| Cairo | 2 | 0 | 0 | 0 | 0 | 0 | 6 | 3 | 17 | 0 | 3 | 1 | 0 | 14 | 3 |
| Fayoum | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | — | — |
| Minya (A) | 0 | 0 | 0 | 0 | 0 | 1 | 4 | 0 | 1 | 0 | 0 | 0 | 0 | 22 | 0 |
| Assyout (A) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 1 | 0 | 0 | 27 | 1 |
| Luxor (A) | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 2 | 0 | 2 | 1 | 0 | 29 | 0 |
| Aswan (A) | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 23 | 0 |
| Siwa | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 20 | 0 |
| Bahariya | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 21 | 0 |
| Farafra | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 24 | 0 |
| Dakhla | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 29 | 0 |
| Kharga | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 27 | 0 |
| Tor | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 22 | 0 |
| Hurghada | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 27 | 0 |
| Quseir | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 26 | 0 |

TABLE A 5.—NUMBER IN HOURS OF OCCURRENCES OF CONCURRENT SURFACE WIND SPEED AND DIRECTION RECORDED WITHIN SPECIFIED RANGES

NOVEMBER — 1964

| Station | Calm (hours) | Variable (hours) | Unrecorded (hours) | Wind speed in knots | Number in hours of occurrences of wind blowing from the ranges of directions indicated | | | | | | | | | | | | | All directions |
|-------------------|--------------|------------------|--------------------|------------------------|---|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|----------------|
| | | | | | 345 | 015 | 045 | 075 | 105 | 135 | 165 | 195 | 225 | 255 | 285 | 315 | | |
| | | | | | / | / | / | / | / | / | / | / | / | / | / | / | | |
| | | | | | 014 | 044 | 074 | 104 | 134 | 164 | 194 | 224 | 254 | 284 | 314 | 344 | | |
| Sallum | 12 | 1 | 0 | 1-10 | 7 | 40 | 69 | 40 | 21 | 16 | 24 | 8 | 18 | 73 | 48 | 26 | 390 | |
| | | | | 11-27 | 0 | 0 | 6 | 1 | 0 | 2 | 4 | 7 | 16 | 164 | 100 | 17 | 317 | |
| | | | | 28-47 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| | | | | ≥48 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| | | | | All speeds | 7 | 40 | 75 | 41 | 21 | 18 | 28 | 15 | 34 | 237 | 148 | 43 | 707 | |
| Mersa Matruh (A) | 11 | 0 | 1 | 1-10 | 34 | 53 | 16 | 35 | 27 | 47 | 22 | 43 | 64 | 41 | 25 | 21 | 428 | |
| | | | | 11-27 | 8 | 10 | 0 | 14 | 7 | 2 | 1 | 10 | 48 | 103 | 32 | 30 | 265 | |
| | | | | 28-47 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 11 | 3 | 15 | |
| | | | | ≥48 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| | | | | All speeds | 42 | 63 | 16 | 49 | 34 | 49 | 23 | 53 | 112 | 145 | 68 | 54 | 708 | |
| Alexandria (A) | 33 | 0 | 2 | 1-10 | 39 | 84 | 71 | 30 | 22 | 23 | 16 | 45 | 20 | 15 | 23 | 57 | 448 | |
| | | | | 11-27 | 3 | 11 | 11 | 2 | 1 | 0 | 3 | 38 | 24 | 19 | 79 | 31 | 225 | |
| | | | | 28-47 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 8 | 1 | 5 | 0 | 18 | |
| | | | | ≥48 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| | | | | All speeds | 42 | 95 | 82 | 32 | 23 | 23 | 19 | 87 | 52 | 35 | 107 | 88 | 681 | |
| Ghazza | 1 | 28 | 2 | 1-10 | 27 | 18 | 29 | 41 | 37 | 161 | 44 | 22 | 13 | 24 | 30 | 41 | 487 | |
| | | | | 11-27 | 17 | 5 | 0 | 0 | 1 | 6 | 24 | 39 | 46 | 19 | 18 | 4 | 189 | |
| | | | | 28-47 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 10 | 1 | 0 | 0 | 15 | |
| | | | | ≥48 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| | | | | All speeds | 44 | 23 | 29 | 41 | 38 | 177 | 68 | 63 | 69 | 44 | 48 | 45 | 689 | |
| Tanta | 68 | 18 | 0 | 1-10 | 61 | 75 | 75 | 31 | 12 | 1 | 9 | 64 | 129 | 44 | 40 | 49 | 590 | |
| | | | | 11-27 | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 7 | 25 | 6 | 0 | 2 | 49 | |
| | | | | 28-47 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| | | | | ≥48 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| | | | | All speeds | 61 | 79 | 75 | 31 | 12 | 1 | 9 | 71 | 154 | 50 | 40 | 51 | 639 | |
| Cairo (A) | 9 | 0 | 39 | 1-10 | 20 | 33 | 64 | 83 | 18 | 9 | 6 | 42 | 36 | 18 | 23 | 33 | 385 | |
| | | | | 11-27 | 3 | 34 | 64 | 16 | 4 | 3 | 16 | 52 | 34 | 33 | 15 | 10 | 285 | |
| | | | | 28-47 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 2 | 0 | 0 | 0 | |
| | | | | ≥48 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| | | | | All speeds | 23 | 67 | 128 | 99 | 22 | 12 | 22 | 95 | 70 | 53 | 38 | 43 | 675 | |
| Fayoum | 41 | 0 | 92 | 1-10 | 204 | 36 | 3 | 6 | 3 | 2 | 42 | 79 | 49 | 43 | 31 | 86 | 589 | |
| | | | | 11-27 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 0 | 0 | 0 | |
| | | | | 28-47 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| | | | | ≥48 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| | | | | All speeds | 204 | 36 | 3 | 6 | 3 | 2 | 42 | 79 | 52 | 43 | 31 | 86 | 589 | |
| Minya (A) | 13 | 46 | 60 | 1-10 | 40 | 9 | 4 | 3 | 8 | 45 | 25 | 10 | 23 | 32 | 67 | 258 | 524 | |
| | | | | 11-27 | 6 | 1 | 0 | 1 | 0 | 0 | 0 | 3 | 4 | 13 | 11 | 38 | 77 | |
| | | | | 28-47 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| | | | | ≥48 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| | | | | All speeds | 46 | 10 | 4 | 4 | 8 | 45 | 25 | 13 | 27 | 45 | 78 | 296 | 601 | |
| Assyout | 5 | 0 | 0 | 1-10 | 1 | 6 | 3 | 6 | 2 | 13 | 8 | 11 | 99 | 252 | 134 | 50 | 584 | |
| | | | | 11-27 | 2 | 0 | 0 | 0 | 25 | 0 | 1 | 7 | 11 | 17 | 49 | 18 | 130 | |
| | | | | 28-47 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| | | | | ≥48 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| | | | | All speeds | 3 | 6 | 3 | 6 | 27 | 13 | 9 | 18 | 110 | 269 | 183 | 68 | 714 | |

TABLE A 5. (contd.)—NUMBER IN HOURS OF OCCURRENCES OF CONCURRENT SURFACE WIND SPEED AND DIRECTION RECORDED WITHIN SPECIFIED RANGES

NOVEMBER — 1964

| Station | Calm (hours) | Variable (hours) | Unrecorded (hours) | Wind speed in knots | Number in hours of occurrences of wind blowing from the ranges of directions indicated | | | | | | | | | | | | |
|--------------------|--------------|------------------|--------------------|------------------------|---|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|----------------|
| | | | | | 345 | 015 | 045 | 075 | 105 | 135 | 165 | 195 | 225 | 255 | 285 | 315 | All directions |
| | | | | | / | / | / | / | / | / | / | / | / | / | / | / | |
| | | | | | 014 | 044 | 074 | 104 | 134 | 164 | 194 | 224 | 254 | 284 | 314 | 344 | |
| Luxor | 28 | 0 | 3 | 1—10 | 69 | 91 | 84 | 26 | 32 | 33 | 108 | 53 | 27 | 25 | 33 | 124 | 645 |
| | | | | 11—27 | 3 | 0 | 4 | 2 | 0 | 0 | 0 | 0 | 0 | 7 | 3 | 25 | 41 |
| | | | | 28—47 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | | | | ≥48 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | | | | All speeds | 62 | 91 | 38 | 28 | 32 | 33 | 108 | 53 | 27 | 32 | 36 | 149 | 689 |
| Aswan | 0 | 0 | 0 | 1—10 | 342 | 143 | 26 | 24 | 5 | 1 | 5 | 0 | 1 | 5 | 26 | 69 | 647 |
| | | | | 11—27 | 51 | 15 | 3 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 73 |
| | | | | 28—47 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | | | | ≥48 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | | | | All speeds | 393 | 158 | 29 | 25 | 6 | 1 | 5 | 0 | 1 | 5 | 26 | 71 | 720 |
| Siwa | 184 | 26 | 0 | 1—10 | 16 | 5 | 32 | 27 | 40 | 38 | 19 | 4 | 21 | 116 | 119 | 21 | 459 |
| | | | | 11—27 | 0 | 0 | 8 | 0 | 1 | 0 | 0 | 0 | 0 | 16 | 18 | 3 | 51 |
| | | | | 28—47 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | | | | ≥48 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | | | | All speeds | 16 | 5 | 32 | 27 | 41 | 38 | 19 | 4 | 21 | 133 | 137 | 24 | 510 |
| Hurghada | 5 | 4 | 14 | 1—10 | 30 | 17 | 9 | 9 | 6 | 8 | 2 | 6 | 12 | 39 | 96 | 18 | 252 |
| | | | | 11—27 | 49 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 1 | 107 | 165 | 120 | 444 |
| | | | | 28—47 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 |
| | | | | ≥48 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | | | | All speeds | 79 | 17 | 9 | 10 | 7 | 8 | 2 | 6 | 13 | 146 | 262 | 138 | 697 |
| Quseir | 0 | 2 | 29 | 1—10 | 36 | 49 | 10 | 12 | 7 | 4 | 0 | 4 | 2 | 55 | 231 | 47 | 467 |
| | | | | 11—27 | 96 | 16 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 24 | 36 | 60 | 232 |
| | | | | 28—47 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | | | | ≥48 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | | | | All speeds | 132 | 65 | 10 | 12 | 7 | 4 | 0 | 4 | 2 | 79 | 267 | 107 | 689 |

UPPER AIR CLIMATOLOGICAL DATA

Table B 1. - MONTHLY MEANS, ABSOLUTE HIGHER AND LOWER VALUES OF ALTITUDE, AIR TEMPERATURE AND DEW POINT AT STANDARD AND SELECTED PRESSURE SURFACES

NOVEMBER — 1964

| Station | Pressure Surface Millibar | Altitude of Pressure Surface (gpm) | | | | Temperature (°C) | | | | Dew Point (°C) | |
|------------------------|---------------------------|------------------------------------|--------|---------|--------|------------------|-------|---------|--------|----------------|-------|
| | | N | Mean | Highest | Lowest | N | Mean | Highest | Lowest | N | Mean |
| Mersa Matruh 0000 U.T. | Surface | 30 | 1018mb | 1024mb | 1008mb | 30 | 15.6 | 20.7 | 12.0 | 30 | 12.3 |
| | 1000 | 30 | 182 | 228 | 95 | 30 | 16.6 | 22.0 | 12.0 | 30 | 12.3 |
| | 850 | 30 | 1551 | 1591 | 1437 | 30 | 9.3 | 15.9 | 2.3 | 24 | 1.9 |
| | 700 | 30 | 3133 | 3218 | 2971 | 30 | -0.2 | 7.8 | -9.7 | 16 | -10.4 |
| | 600 | 30 | 4344 | 4464 | 4164 | 30 | -6.9 | -0.3 | -14.0 | 6 | -17.4 |
| | 500 | 30 | 5749 | 5880 | 5557 | 30 | -16.6 | -11.4 | -22.4 | 5 | -26.6 |
| | 400 | 30 | 7385 | 7557 | 7191 | 30 | -29.0 | -24.0 | -33.8 | 4 | -34.0 |
| | 300 | 27 | 9387 | 9584 | 9166 | 27 | -40.2 | -40.0 | -50.0 | — | — |
| | 200 | 24 | 12009 | 12209 | 11728 | 24 | -57.9 | -51.5 | -62.2 | — | — |
| | 150 | 22 | 13798 | 13965 | 13662 | 22 | -58.1 | -57.2 | -69.0 | — | — |
| | 100 | 21 | 16291 | 16381 | 16037 | 21 | -66.1 | -62.4 | -71.9 | — | — |
| | 70 | 12 | 18428 | 18510 | 18260 | 12 | -64.7 | -60.6 | -62.6 | — | — |
| | 50 | 9 | 20536 | 20592 | 20421 | 9 | -61.8 | -58.2 | -67.6 | — | — |
| | 30 | 4 | 23775 | 23832 | 23739 | 4 | -54.0 | -52.6 | -56.4 | — | — |
| | 20 | 1 | 26386 | — | — | 1 | -50.6 | — | — | — | — |
| | 10 | — | — | — | — | — | — | — | — | — | — |
| Helwan 0000 U.T. | Surface | 29 | 1000mb | 1006mb | 995mb | 29 | 15.9 | 22.6 | 9.3 | 29 | 9.9 |
| | 1000 | 29 | 146 | 190 | 100 | 18 | 16.6 | 21.8 | 12.1 | 18 | 11.5 |
| | 850 | 29 | 1522 | 1564 | 1444 | 29 | 11.3 | 20.6 | 2.2 | 26 | -2.3 |
| | 700 | 29 | 3114 | 3185 | 2997 | 29 | 2.3 | 7.0 | -5.5 | 15 | -12.5 |
| | 600 | 29 | 4343 | 4487 | 4217 | 29 | -4.6 | 1.4 | -9.0 | 5 | -18.1 |
| | 500 | 29 | 5732 | 5877 | 5609 | 29 | -14.1 | -8.1 | -19.4 | 3 | -23.9 |
| | 400 | 29 | 7406 | 7573 | 7233 | 29 | -26.5 | -21.0 | -34.0 | 3 | -35.1 |
| | 300 | 29 | 9419 | 9618 | 9226 | 29 | -42.0 | -39.0 | -48.4 | — | — |
| | 200 | 29 | 12063 | 12283 | 11853 | 29 | -56.7 | -49.4 | -62.6 | — | — |
| | 150 | 28 | 13843 | 14004 | 13661 | 28 | -61.1 | -57.6 | -69.8 | — | — |
| | 100 | 27 | 16230 | 16425 | 16148 | 27 | -67.3 | -61.9 | -72.5 | — | — |
| | 70 | 21 | 18464 | 18560 | 18310 | 21 | -66.2 | -60.0 | -72.6 | — | — |
| | 50 | 19 | 19399 | 19499 | 19265 | 19 | -63.5 | -57.2 | -68.7 | — | — |
| | 40 | 18 | 20466 | 20619 | 20409 | 18 | -60.8 | -55.6 | -66.0 | — | — |
| | 30 | 13 | 21925 | 22013 | 21814 | 13 | -57.4 | -53.9 | -59.3 | — | — |
| | 20 | 11 | 23747 | 23844 | 23644 | 11 | -54.0 | -51.6 | -56.0 | — | — |
| | 10 | 9 | 26381 | 26479 | 26254 | 9 | -50.6 | -49.1 | -51.9 | — | — |
| Aswan 0000 U.T. | Surface | 23 | 992mb | 997mb | 989mb | 23 | 16.1 | 23.0 | 10.8 | 23 | 4.9 |
| | 1000 | 23 | 127 | 168 | 97 | — | — | — | — | — | — |
| | 850 | 23 | 1509 | 1587 | 1472 | 23 | 13.1 | 21.3 | 4.4 | 21 | -0.2 |
| | 700 | 23 | 3119 | 3175 | 3058 | 23 | 5.0 | 6.9 | 1.7 | 8 | -9.2 |
| | 600 | 23 | 4362 | 4428 | 4287 | 23 | -1.9 | 1.5 | -1.3 | 5 | -16.6 |
| | 500 | 23 | 5791 | 5863 | 5712 | 23 | -11.1 | -8.4 | -14.4 | 4 | -22.4 |
| | 400 | 23 | 7463 | 7543 | 7319 | 23 | -23.3 | -21.3 | -31.1 | 2 | -30.4 |
| | 300 | 23 | 9544 | 9608 | 9303 | 23 | -38.5 | -29.7 | -43.2 | 1 | -48.9 |
| | 200 | 23 | 12173 | 12304 | 12093 | 23 | -57.6 | -53.6 | -60.0 | — | — |
| | 150 | 23 | 13948 | 14085 | 13723 | 23 | -65.9 | -61.9 | -69.3 | — | — |
| | 100 | 19 | 16373 | 16542 | 16048 | 19 | -73.8 | -70.3 | -77.8 | — | — |
| | 70 | 14 | 18362 | 18900 | 18180 | 14 | -70.7 | -65.8 | -80.4 | — | — |
| | 50 | 11 | 20496 | 20619 | 20212 | 11 | -63.5 | -60.6 | -66.9 | — | — |
| | 30 | 8 | 23649 | 23858 | 23402 | 8 | -55.0 | -51.8 | -58.2 | — | — |
| | 20 | 8 | 26284 | 26509 | 25989 | 8 | -50.8 | -48.0 | -53.4 | — | — |
| | 10 | 2 | 30798 | 30853 | 30743 | 2 | -47.1 | -45.7 | -48.8 | — | — |

N = Number of observations of specified pressure surface.

* The atmospheric pressure corrected to the elevation of the transducer.

UPPER AIR CLIMATOLOGICAL DATA

Table B 1. (contd.)—MONTHLY MEANS, ABSOLUTE HIGHER AND LOWER VALUES OF ALTITUDE, AIR TEMPERATURE AND DEW POINT AT STANDARD AND SELECTED PRESSURE SURFACES

NOVEMBER — 1964

| Station | Pressure Surface Millibar | Altitude of Pressure Surface (gpm) | | | | Temperature (°C) | | | | Dew Point (°C) | |
|------------------------|---------------------------|------------------------------------|----------------------|----------------------|----------------------|------------------|-------|---------|--------|----------------|-------|
| | | N | Mean | Highest | Lowest | N | Mean | Highest | Lowest | N | Mean |
| Mersa Matruh 1200 U.T. | Surface | 30 | 1017 [*] mb | 1023 [*] mb | 1010 [*] mb | 30 | 21.4 | 26.5 | 14.5 | 30 | 13.8 |
| | 1000 | 30 | 174 | 209 | 113 | 30 | 19.7 | 26.3 | 13.1 | 30 | 12.3 |
| | 850 | 30 | 1551 | 1595 | 1455 | 30 | 9.4 | 18.4 | 2.7 | 25 | 0.3 |
| | 700 | 30 | 3135 | 3218 | 3010 | 30 | 0.7 | 7.5 | -6.7 | 15 | -11.9 |
| | 600 | 30 | 4357 | 4468 | 4208 | 30 | -5.4 | -0.2 | -10.1 | 7 | -17.5 |
| | 500 | 30 | 5759 | 5876 | 5586 | 30 | -16.2 | -10.6 | -21.1 | 4 | -26.1 |
| | 400 | 30 | 7395 | 7572 | 7206 | 30 | -28.3 | -22.5 | -33.6 | 1 | -35.2 |
| | 300 | 30 | 9400 | 9608 | 9191 | 29 | -44.4 | -39.0 | -48.0 | — | — |
| | 200 | 30 | 12044 | 12264 | 11824 | 30 | -56.8 | -51.6 | -61.8 | — | — |
| | 150 | 29 | 13844 | 14026 | 13634 | 29 | -62.0 | -56.2 | -68.8 | — | — |
| | 100 | 26 | 16355 | 16526 | 16124 | 26 | -65.4 | -61.0 | -70.0 | — | — |
| | 70 | 14 | 18486 | 18600 | 18260 | 14 | -62.2 | -56.6 | -67.8 | — | — |
| | 50 | 12 | 20604 | 20700 | 20492 | 12 | -57.7 | -49.2 | -62.8 | — | — |
| | 30 | 10 | 23853 | 23980 | 23745 | 10 | -57.8 | -49.1 | -57.1 | — | — |
| | 20 | 7 | 26458 | 26573 | 26360 | 7 | -47.8 | -45.7 | -50.9 | — | — |
| | 10 | 2 | 31033 | 31082 | 30984 | 2 | -40.0 | -39.6 | -40.3 | — | — |
| Halwan 1200 U.T. | Surface | 29 | 1000 [*] mb | 1005 [*] mb | 933 [*] mb | 29 | 24.0 | 33.6 | 16.8 | 29 | 6.7 |
| | 1000 | 29 | 139 | 182 | 84 | 16 | 23.0 | 33.6 | 16.8 | 16 | 11.9 |
| | 850 | 29 | 1523 | 1568 | 1438 | 29 | 11.0 | 20.2 | 4.0 | 23 | -2.0 |
| | 700 | 29 | 3115 | 3202 | 2984 | 29 | 2.3 | 8.7 | -6.5 | 11 | -12.7 |
| | 600 | 29 | 4344 | 4458 | 4204 | 29 | -4.8 | 1.5 | -11.7 | 4 | -19.8 |
| | 500 | 29 | 5755 | 5895 | 5602 | 29 | -13.9 | -7.0 | -21.0 | 5 | -26.7 |
| | 400 | 29 | 7409 | 7588 | 7235 | 29 | -26.4 | -20.1 | -32.9 | 3 | -34.7 |
| | 300 | 29 | 9425 | 9648 | 9197 | 29 | -41.5 | -37.0 | -47.5 | — | — |
| | 200 | 29 | 12077 | 12325 | 11847 | 29 | -57.3 | -52.8 | -61.1 | — | — |
| | 150 | 28 | 13869 | 14096 | 13672 | 28 | -63.2 | -55.5 | -68.8 | — | — |
| | 100 | 26 | 16346 | 16530 | 16178 | 26 | -66.7 | -61.2 | -72.3 | — | — |
| | 70 | 22 | 18517 | 18680 | 18400 | 22 | -65.3 | -59.5 | -71.3 | — | — |
| | 50 | 19 | 20581 | 20736 | 20465 | 19 | -59.6 | -53.1 | -63.3 | — | — |
| | 30 | 13 | 23834 | 23947 | 23717 | 13 | -53.2 | -49.4 | -57.2 | — | — |
| | 20 | 5 | 26500 | 26642 | 26394 | 5 | -48.1 | -45.0 | -51.4 | — | — |
| | 10 | 1 | 30974 | — | — | 1 | -49.0 | — | — | — | — |
| Aswan 1200 U.T. | Surface | 22 | 992 [*] mb | 996 [*] mb | 988 [*] mb | 22 | 27.4 | 37.2 | 20.0 | 22 | 7.0 |
| | 000 | 22 | 121 | 159 | 86 | — | — | — | — | — | — |
| | 850 | 22 | 1522 | 1580 | 1472 | 22 | 14.4 | 22.1 | 6.3 | 19 | -0.6 |
| | 700 | 22 | 3137 | 3191 | 3073 | 22 | 6.0 | 8.6 | 2.6 | 8 | -8.2 |
| | 600 | 22 | 4384 | 4442 | 4311 | 22 | -1.4 | 2.3 | -5.8 | 1 | -14.7 |
| | 500 | 22 | 5814 | 5886 | 5731 | 22 | -10.1 | -7.0 | -14.8 | 2 | -20.4 |
| | 400 | 22 | 7496 | 7576 | 7405 | 22 | -22.3 | -19.5 | -27.7 | 3 | -29.7 |
| | 300 | 22 | 9544 | 9645 | 9415 | 22 | -37.8 | -35.0 | -41.5 | — | — |
| | 200 | 22 | 12230 | 12350 | 12067 | 22 | -56.0 | -52.6 | -59.8 | — | — |
| | 150 | 22 | 14019 | 14155 | 13680 | 22 | -64.4 | -61.0 | -69.5 | — | — |
| | 100 | 19 | 16460 | 16652 | 16350 | 19 | -73.1 | -66.8 | -79.5 | — | — |
| | 70 | 13 | 18472 | 18680 | 18450 | 13 | -70.4 | -66.1 | -74.2 | — | — |
| | 50 | 7 | 20615 | 20726 | 20511 | 7 | -59.4 | -54.7 | -61.3 | — | — |
| | 30 | 6 | 23854 | 23981 | 23768 | 6 | -51.8 | -50.4 | -53.1 | — | — |
| | 20 | 4 | 26510 | 26330 | 26416 | 4 | -46.8 | -45.4 | -48.0 | — | — |
| | 10 | 1 | 31318 | — | — | 1 | -35.4 | — | — | — | — |

N = Number of observations of specified pressure surface.

* The superscripted asterisk indicates that the value is a rounded figure of the actual value.

**TABLE B 2.--MEAN AND EXTREME VALUES OF THE FREEZING LEVEL AND THE TROPOPAUSE ;
THE HIGHEST WIND SPEED IN THE UPPER AIR**

NOVEMBER 1964

| Station | | Freezing level | | | | | | | | | First Tropopause | | | | | | | | | Highest wind speed | | | | |
|-----------|---------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|------------------|----------------|------------------|----------------|----------------|------------------|----------------|----------------|------------------|--------------------|----------------|----------------------|----------------|--|
| | | Mean | | | Highest | | | Lowest | | | Mean | | | Highest | | | Lowest | | | Altitude (gpm) | Pressure (mb.) | Direction (000—360)° | Speed in Knots | |
| | | Altitude (gpm) | Pressure (mb.) | Dew point (°C) | Altitude (gpm) | Pressure (mb.) | Dew point (°C) | Altitude (gpm) | Pressure (mb.) | Dew point (°C) | Altitude (gpm) | Pressure (mb.) | Temperature (°C) | Altitude (gpm) | Pressure (mb.) | Temperature (°C) | Altitude (gpm) | Pressure (mb.) | Temperature (°C) | | | | | |
| 0000 UT | M. Matruh (A) | (N) | (N) | (N) | | | | | | | (N) | (N) | (N) | | | | | | | | | | | |
| | | 3065 (30) | 660 (30) | - 6.5 (15) | 4390 | .04 | -15.0 | 1730 | 820 | - 2.4 | 11911 (21) | 174 (21) | -54.2 (21) | 14400 | 134 | -68.3 | 10360 | 253 | -54.3 | 7050 | 307 | 302 | 130 | |
| | Helwan . . . | 3364 (29) | 681 (29) | - 7.9 (12) | 4670 | 582 | — | 1760 | 818 | — | 13301 (26) | 167 (26) | -63.8 (26) | 17570 | 80 | -73.2 | 9820 | 278 | -51.9 | 15750 | 109 | 270 | 140 | |
| | Aswan . . (A) | 4068 (23) | 623 (23) | -15.1 (5) | 4610 | 586 | — | 3380 | 672 | — | 15855 (15) | 112 (15) | -71.4 (15) | 17300 | 86 | -75.8 | 12620 | 187 | -63.4 | 13290 | 166 | 250 | 150 | |
| 1200 U.T. | M. Matruh (A) | (N) | (N) | (N) | | | | | | | (N) | (N) | (N) | | | | | | | | | | | |
| | | 3186 (30) | 698 (30) | - 7.8 (15) | 4400 | 602 | — | 1820 | 816 | - 5.3 | 12246 (27) | 195 (27) | -57.6 (27) | 13780 | 155 | -68.7 | 9850 | 271 | -52.5 | 13525 | 157 | 226 | 114 | |
| | Helwan . . . | 3355 (29) | 666 (29) | - 6.5 (13) | 4700 | 586 | — | 1920 | 796 | - 8.2 | 13298 (27) | 168 (27) | -63.2 (27) | 15700 | 114 | -69.7 | 9550 | 284 | -48.5 | 8210 | 351 | 280 | 134 | |
| | Aswan . . (A) | 4250 (22) | 598 (22) | -14.8 (2) | 4780 | 575 | — | 3440 | 648 | -11.0 | 15304 (16) | 110 (16) | -71.7 (16) | 16900 | 95 | -77.0 | 14030 | 151 | -69.5 | 12700 | 186 | 270 | 122 | |

N — The number of cases the element has been observed during the month.

TABLE B 3.—NUMBER OF OCCURRENCES OF WIND DIRECTION WITHIN SPECIFIED RANGES AND THE MEAN SCALAR WIND SPEED AT THE STANDARD AND SELECTED PRESSURE SURFACES.

MERSA MATRUH (A)— NOVEMBER 1964

| Time | Pressure Surface Millibar | Wind between ranges of direction (000—360)° | | | | | | | | | | | | | | | | | | | | | | | | Number of calm winds | Total number of observations (TN) | Mean scalar wind speed (knots) |
|-----------|------------------------------|---|-----------|-----------------|-----------|-----------------|-----------|-----------------|-----------|-----------------|-----------|-----------------|-----------|-----------------|-----------|-----------------|-----------|-----------------|-----------|-----------------|-----------|-----------------|-----------|-----------------|-----------|-------------------------|--------------------------------------|-----------------------------------|
| | | 345 / 014 | | 015 / 044 | | 045 / 074 | | 075 / 104 | | 105 / 134 | | 135 / 164 | | 165 / 194 | | 195 / 224 | | 225 / 254 | | 255 / 284 | | 285 / 314 | | 315 / 344 | | | | |
| | | N | (ff) m | N | (ff) m | N | (ff) m | N | (ff) m | N | (ff) m | N | (ff) m | N | (ff) m | N | (ff) m | N | (ff) m | N | (ff) m | N | (ff) m | N | (ff) m | | | |
| 0000 U.T. | Surface | 1 | 12 | 2 | 8 | 2 | 2 | 3 | 7 | 2 | 5 | 2 | 8 | 0 | — | 4 | 11 | 4 | 9 | 7 | 11 | 0 | — | 3 | 18 | 0 | 30 | 10 |
| | 1000 | 0 | — | 4 | 11 | 0 | — | 3 | 12 | 2 | 4 | 2 | 10 | 0 | — | 2 | 9 | 2 | 20 | 3 | 18 | 6 | 16 | 3 | 18 | 2 | 29 | 13 |
| | 850 | 1 | 3 | 2 | 7 | 2 | 16 | 2 | 8 | 0 | — | 2 | 12 | 1 | 4 | 3 | 12 | 0 | — | 2 | 19 | 7 | 22 | 6 | 17 | 0 | 28 | 15 |
| | 700 | 2 | 8 | 1 | 3 | 1 | 20 | 0 | — | 2 | 12 | 0 | — | 1 | 13 | 1 | 11 | 2 | 20 | 4 | 21 | 4 | 23 | 6 | 22 | 1 | 25 | 17 |
| | 600 | 0 | — | 1 | 14 | 0 | — | 0 | — | 2 | 8 | 1 | 4 | 0 | — | 1 | 43 | 3 | 19 | 8 | 17 | 6 | 36 | 3 | 16 | 0 | 25 | 31 |
| | 500 | 1 | 17 | 1 | 11 | 0 | — | 0 | — | 0 | — | 0 | — | 1 | 18 | 0 | — | 4 | 31 | 9 | 26 | 8 | 37 | 1 | 35 | 0 | 25 | 30 |
| | 400 | 1 | 10 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 1 | 55 | 5 | 29 | 7 | 38 | 6 | 56 | 4 | 36 | 0 | 24 | 40 |
| | 300 | 1 | 8 | 1 | 6 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 1 | 101 | 2 | 62 | 11 | 50 | 7 | 49 | 0 | — | 0 | 23 | 49 |
| | 200 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 1 | 60 | 1 | 90 | 10 | 62 | 5 | 46 | 1 | 33 | 0 | 18 | 58 |
| | 150 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 1 | 51 | 1 | 70 | 10 | 55 | 4 | 36 | 0 | — | 0 | 16 | 51 |
| | 100 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 1 | 31 | 1 | 42 | 6 | 40 | 1 | 49 | 0 | — | 0 | 9 | 40 |
| | 70 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 2 | 14 | 1 | 33 | 0 | — | 0 | 3 | 20 |
| | 60 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 1 | 15 | 1 | 18 | 0 | — | 0 | 2 | 16 |
| | 50 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 1 | 18 | 0 | — | 0 | — | 0 | 1 | 18 |
| 40 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 1 | 11 | 0 | — | — | — | 0 | 1 | 11 | |
| 30 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| 20 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| 10 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| 1200 U.T. | Surface | 3 | 8 | 4 | 11 | 1 | 8 | 3 | 14 | 1 | 10 | 0 | — | 0 | — | 0 | — | 4 | 13 | 4 | 19 | 4 | 17 | 6 | 13 | 0 | 30 | 14 |
| | 1000 | 3 | 7 | 2 | 13 | 1 | 7 | 4 | 14 | 1 | 15 | 0 | — | 0 | — | 0 | — | 3 | 9 | 6 | 19 | 5 | 18 | 4 | 14 | 0 | 29 | 14 |
| | 850 | 0 | — | 2 | 10 | 0 | — | 1 | 7 | 5 | 12 | 1 | 12 | 0 | — | 3 | 12 | 3 | 17 | 5 | 18 | 7 | 18 | 3 | 17 | 0 | 30 | 15 |
| | 700 | 0 | — | 2 | 6 | 1 | 16 | 2 | 10 | 1 | 5 | 2 | 12 | 1 | 17 | 4 | 16 | 3 | 27 | 4 | 16 | 4 | 22 | 6 | 22 | 0 | 30 | 17 |
| | 600 | 1 | 12 | 2 | 8 | 0 | — | 1 | 4 | 0 | — | 0 | — | 1 | 7 | 5 | 15 | 5 | 26 | 5 | 23 | 7 | 36 | 3 | 20 | 0 | 30 | 22 |
| | 500 | 1 | 10 | 1 | 20 | 0 | — | 0 | — | 0 | — | 1 | 9 | 0 | — | 2 | 26 | 8 | 36 | 7 | 25 | 9 | 33 | 1 | 14 | 0 | 30 | 29 |
| | 400 | 0 | — | 1 | 18 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 3 | 31 | 6 | 56 | 10 | 42 | 8 | 45 | 1 | 18 | 0 | 29 | 43 |
| | 300 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 2 | 28 | 7 | 51 | 10 | 53 | 7 | 62 | 2 | 18 | 0 | 28 | 50 |
| | 200 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 7 | 59 | 12 | 64 | 5 | 63 | 1 | 14 | 0 | 25 | 61 |
| | 150 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 1 | 27 | 3 | 48 | 11 | 53 | 6 | 48 | 0 | — | 0 | 21 | 50 |
| | 100 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 2 | — | 0 | — | 1 | 32 | 3 | 33 | 8 | 29 | 3 | 27 | 0 | — | 0 | 15 | 30 |
| | 70 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 1 | — | 0 | — | 1 | 15 | 2 | 8 | 2 | 33 | 1 | 10 | 0 | — | 0 | 6 | 18 |
| | 60 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 1 | 17 | 1 | 13 | 4 | 20 | 0 | — | 0 | — | 0 | 6 | 18 |
| | 50 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 1 | 4 | 1 | 3 | 3 | 16 | 0 | — | 0 | — | 0 | 5 | 11 |
| 40 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 2 | 22 | 0 | — | — | 8 | 0 | — | 0 | — | 0 | 3 | 17 | |
| 30 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | — | — | 2 | 10 | 0 | — | 0 | — | 0 | 2 | 10 | |
| 20 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | — | — | — | — | 1 | 11 | — | — | — | — | — | — | 1 | 11 |
| 10 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |

N — The number of cases the element has been observed during the month.
 TN — The total number of cases the wind has been observed for all directions during the month.

**Table B 3. (cont'd)—NUMBER OF OCCURRENCES OF WIND DIRECTION WITHIN SPECIFIED RANGES AND
THE MEAN SCALAR WIND SPEED AT THE STANDARD AND SELECTED PRESSURE SURFACES**

HELWAN — NOVEMBER 1964

| Time | Pressure Surface (Millibar) | Wind between ranges of direction (000—360)° | | | | | | | | | | | | | | | | | | | | | | | | Number of Calm winds | Total Number of Observations (T N) | Mean Scalar wind Speed (Knots) |
|-----------|--------------------------------|---|-----------|-----|-----------|-----|-----------|-----|-----------|-----|-----------|-----|-----------|-----|-----------|-----|-----------|-----|-----------|-----|-----------|-----|-----------|-----|-----------|-------------------------|---------------------------------------|-----------------------------------|
| | | 345 | | 015 | | 045 | | 075 | | 105 | | 135 | | 165 | | 195 | | 225 | | 255 | | 285 | | 315 | | | | |
| | | 014 | | 044 | | 074 | | 104 | | 134 | | 164 | | 194 | | 224 | | 254 | | 284 | | 314 | | 344 | | | | |
| | | N | (ff) m | N | (ff) m | N | (ff) m | N | (ff) m | N | (ff) m | N | (ff) m | N | (ff) m | N | (ff) m | N | (ff) m | N | (ff) m | N | (ff) m | N | (ff) m | | | |
| 0000 U.T. | Surface | 0 | — | 4 | 8 | 8 | 12 | 1 | 4 | 2 | 4 | 1 | 2 | 0 | — | 1 | 15 | 1 | 7 | 0 | — | 0 | — | 1 | 5 | 10 | 29 | 6 |
| | 1000 | 0 | — | 8 | 15 | 3 | 21 | 2 | 8 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 3 | 5 | 12 | 18 | 12 |
| | 850 | 2 | 11 | 1 | 13 | 2 | 18 | 1 | 3 | 0 | — | 0 | — | 1 | 6 | 4 | 6 | 4 | 9 | 5 | 23 | 7 | 20 | 0 | — | 2 | 29 | 14 |
| | 700 | 0 | — | 2 | 4 | 2 | 15 | 0 | — | 0 | — | 1 | 7 | 1 | 17 | 3 | 23 | 4 | 14 | 9 | 26 | 7 | 16 | 0 | — | 0 | 29 | 19 |
| | 600 | 2 | 10 | 2 | 11 | 0 | — | 0 | — | 0 | — | 0 | — | 1 | 11 | 4 | 29 | 3 | 17 | 7 | 38 | 7 | 15 | 1 | 22 | 2 | 29 | 21 |
| | 500 | 0 | — | 1 | 19 | 0 | — | 0 | — | 0 | — | 0 | — | 1 | 27 | 4 | 31 | 3 | 32 | 10 | 32 | 6 | 26 | 3 | 8 | 0 | 28 | 27 |
| | 400 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 1 | 29 | 1 | 57 | 8 | 40 | 8 | 44 | 7 | 31 | 3 | 18 | 0 | 28 | 27 |
| | 300 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 2 | 62 | 7 | 53 | 8 | 52 | 7 | 35 | 2 | 26 | 0 | 26 | 27 |
| | 200 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 1 | 26 | 7 | 76 | 12 | 61 | 3 | 39 | 2 | 36 | 0 | 25 | 29 |
| | 150 | 0 | — | 6 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 2 | 86 | 13 | 61 | 3 | 51 | 0 | — | 0 | 18 | 29 |
| | 100 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 2 | 94 | 7 | 63 | 5 | 32 | 0 | — | 0 | 14 | 27 |
| | 70 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 5 | 40 | 2 | 22 | 0 | — | 0 | 7 | 35 |
| | 60 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 1 | 13 | 2 | 24 | 0 | — | 0 | 3 | 20 |
| | 50 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 1 | 30 | 0 | — | 0 | — | 0 | 1 | 30 |
| | 40 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 1 | 8 | 0 | — | 0 | — | 0 | 1 | 8 |
| 30 | 0 | — | 0 | — | 1 | 13 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | 1 | 13 | |
| 20 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 1 | 8 | 0 | — | 0 | — | 0 | 1 | 8 | |
| 10 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | |
| 1200 U.T. | Surface | 3 | 12 | 4 | 14 | 2 | 19 | 0 | — | 0 | — | 0 | — | 1 | 6 | 6 | 7 | 4 | 14 | 1 | 8 | 4 | 9 | 2 | 11 | 2 | 29 | 01 |
| | 1000 | 1 | 17 | 5 | 17 | 1 | 27 | 0 | — | 0 | — | 0 | — | 0 | — | 2 | 6 | 1 | 4 | 1 | 5 | 3 | 10 | 1 | 9 | 1 | 16 | 12 |
| | 850 | 3 | 13 | 3 | 11 | 3 | 18 | 2 | 10 | 1 | 5 | 1 | 6 | 0 | — | 2 | 14 | 5 | 16 | 3 | 16 | 4 | 11 | 2 | 4 | 0 | 29 | 13 |
| | 700 | 1 | 10 | 1 | 10 | 3 | 8 | 0 | — | 0 | — | 1 | 9 | 2 | 26 | 4 | 10 | 1 | 12 | 7 | 24 | 4 | 23 | 5 | 10 | 0 | 29 | 16 |
| | 600 | 2 | 3 | 2 | 8 | 0 | — | 0 | — | 0 | — | 1 | 12 | 1 | 15 | 3 | 27 | 3 | 16 | 7 | 29 | 6 | 23 | 3 | 15 | 1 | 29 | 20 |
| | 500 | 1 | 8 | 0 | — | 1 | 6 | 0 | — | 0 | — | 0 | — | 1 | 24 | 2 | 36 | 7 | 32 | 8 | 36 | 8 | 22 | 1 | 10 | 0 | 29 | 28 |
| | 400 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 1 | 58 | 2 | 50 | 3 | 34 | 13 | 46 | 9 | 23 | 0 | — | 0 | 28 | 38 |
| | 300 | 0 | — | 1 | 48 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 2 | 62 | 4 | 74 | 14 | 26 | 6 | 34 | 1 | 21 | 0 | 28 | 53 |
| | 200 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 1 | 101 | 2 | 90 | 10 | 62 | 7 | 42 | 1 | 46 | 0 | 21 | 59 |
| | 150 | 1 | 53 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 1 | 85 | 0 | — | 14 | 60 | 3 | 37 | 0 | — | 0 | 19 | 57 |
| | 100 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 4 | 43 | 6 | 49 | 2 | 47 | 1 | 22 | 0 | 13 | 45 |
| | 70 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 1 | 10 | 0 | — | 3 | 18 | 3 | 22 | 0 | — | 0 | 7 | 19 |
| | 60 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 2 | 18 | 1 | 17 | 1 | — | 0 | 3 | 18 |
| | 50 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 3 | 19 | 0 | — | 0 | — | 0 | 3 | 19 |
| | 40 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 2 | 22 | 1 | 23 | 0 | — | 0 | 3 | 22 |
| 30 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 1 | 13 | 1 | 39 | 1 | 21 | 0 | — | 0 | — | 0 | 3 | 21 | |
| 20 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | — | — | 0 | — | 2 | 26 | 0 | — | 0 | — | 0 | 2 | 26 | |
| 10 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | |

N = The number of cases the element has been observed during the month.

TN 3= The total number of cases the wind has been observed for all directions during the month.

TABLE B 3 (contd.)—NUMBER OF OCCURRENCES OF WIND DIRECTION WITHIN SPECIFIED RANGES AND THE MEAN SCALAR WIND SPEED AT THE STANDARD AND SELECTED PRESSURE SURFACES.

ASWAN (A) — NOVEMBER 1964

| Time | Pressure Surface Millibar | Wind between ranges of direction (000—360)° | | | | | | | | | | | | | | | | Number of calm winds | Total number of observations (TN) | Mean scalar wind speed (Knots) | | | | | | | | |
|-----------|------------------------------|---|-----------|-----------------|-----------|-----------------|-----------|-----------------|-----------|-----------------|-----------|-----------------|-----------|-----------------|-----------|-----------------|-----------|-------------------------|--------------------------------------|-----------------------------------|-----------------|-----------|-----------------|-----------|-----------------|-----------|-----------------|-----------|
| | | 345 / 014 | | 015 / 044 | | 045 / 074 | | 075 / 104 | | 105 / 134 | | 135 / 164 | | 165 / 194 | | 195 / 224 | | | | | 225 / 254 | | 255 / 284 | | 285 / 314 | | 315 / 344 | |
| | | N | (ff) m | N | (ff) m | N | (ff) m | N | (ff) m | N | (ff) m | N | (ff) m | N | (ff) m | N | (ff) m | | | | N | (ff) m | N | (ff) m | N | (ff) m | N | (ff) m |
| 0000 U.T. | Surface | 17 | 11 | 2 | 12 | 1 | 13 | 1 | 8 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 2 | 10 | 0 | 23 | 11 |
| | 1000 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | |
| | 850 | 2 | 13 | 4 | 10 | 2 | 10 | 2 | 7 | 3 | 8 | 0 | — | 0 | — | 0 | — | 0 | — | 3 | 5 | 5 | 8 | 2 | 10 | 0 | 23 | 9 |
| | 700 | 0 | — | 0 | — | 0 | — | 0 | — | 2 | 18 | 0 | — | 2 | 8 | 2 | 11 | 4 | 21 | 6 | 15 | 4 | 14 | 3 | 13 | 0 | 23 | 15 |
| | 600 | 0 | — | 0 | — | 0 | — | 1 | 4 | 2 | 8 | 0 | — | 0 | — | 1 | 8 | 4 | 44 | 7 | 24 | 5 | 23 | 1 | 24 | 2 | 23 | 20 |
| | 500 | 1 | 10 | 2 | 20 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 4 | 31 | 9 | 38 | 6 | 31 | 0 | — | 1 | 23 | 30 |
| | 400 | 1 | 8 | 0 | — | 0 | — | 0 | — | 6 | — | 0 | — | 0 | — | 0 | — | 4 | 31 | 14 | 32 | 2 | 38 | 2 | 12 | 0 | 23 | 34 |
| | 300 | 1 | 17 | 0 | — | 1 | 13 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 3 | 51 | 15 | 51 | 3 | 50 | 0 | — | 0 | 23 | 48 |
| | 200 | 1 | 8 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 4 | 90 | 15 | 62 | 2 | 42 | 0 | — | 0 | 22 | 62 |
| | 150 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 1 | 106 | 10 | 56 | 1 | 45 | 0 | — | 0 | 12 | 59 |
| | 100 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 1 | 112 | 6 | 56 | 0 | — | 0 | — | 0 | 7 | 64 |
| | 70 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| | 60 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| 50 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | |
| 40 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | |
| 30 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | |
| 20 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | |
| 10 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | |
| 1200 U.T. | Surface | 14 | 12 | 4 | 12 | 0 | — | 1 | 8 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 1 | 8 | 0 | — | 1 | 15 | 1 | 22 | 11 |
| | 1000 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| | 850 | 3 | 14 | 1 | 10 | 1 | 6 | 4 | 6 | 3 | 5 | 1 | 9 | 0 | — | 0 | — | 0 | — | 3 | 8 | 1 | 9 | 5 | 16 | 0 | 22 | 10 |
| | 700 | 1 | 14 | 0 | — | 0 | — | 0 | — | 2 | 10 | 0 | — | 0 | — | 0 | — | 4 | 18 | 9 | 17 | 2 | 20 | 3 | 10 | 1 | 22 | 18 |
| | 600 | 0 | — | 0 | — | 3 | 12 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 2 | 16 | 9 | 28 | 2 | 22 | 1 | 23 | 1 | 22 | 21 |
| | 500 | 0 | — | 0 | — | 1 | 10 | 0 | — | 0 | — | 0 | — | 0 | — | 1 | 12 | 6 | 26 | 9 | 33 | 1 | 47 | 2 | 24 | 2 | 22 | 30 |
| | 400 | 0 | — | 1 | 17 | 1 | 11 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 6 | 57 | 10 | 35 | 2 | 57 | 1 | 11 | 0 | 21 | 40 |
| | 300 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 2 | 96 | 10 | 48 | 6 | 40 | 1 | 20 | 0 | 19 | 49 |
| | 200 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 2 | 75 | 11 | 62 | 3 | 36 | 0 | — | 0 | 16 | 59 |
| | 150 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 9 | 58 | 3 | 40 | 0 | — | 0 | 12 | 54 |
| | 100 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 1 | 22 | 3 | 49 | 1 | 42 | 0 | — | 0 | 5 | 42 |
| | 70 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| | 60 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| 50 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | |
| 40 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | |
| 30 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | |
| 20 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | |
| 10 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | |

N — The number of cases the element has been observed during the month.
TN — The total number of cases the wind has been observed for all directions during the month.

REVIEW OF AGRO—METEOROLOGICAL STATIONS

EL KASR—NOVEMBER 1964

Compared with the normal values, this month was slightly colder and more humid.

A warm spell started on the 11th. with the peak on the 12th. when the absolute maximum of air temperature at 2 metres above ground (7.1°C above normal), and the highest values of daytime mean (5.4°C above normal), as well as those of soil temperatures for the surface layers down to 10 cms. depth in dry field, were observed ; also lowest relative humidity (43% below normal) occurred on that day.

A cold spell began on the 19th., with the peak on the 21st. when the absolute minima of air temperature at 5,200 cms. above ground, and those of soil temperatures for the surface layers down to 5 cms. of depth occurred.

The absolute maximum of soil temperatures at 20 cms. depth occurred on the 2nd. while that for 50, 100 and 200 cms. depths. occurred on the 1st. and 2nd. The absolute minima for depths 10 and 20 cms. occurred on the 23 rd. for 50 cms. on the 25 th. and 26 th. and for 100 and 200 cms. on the 30th.

The highest values of evaporation from pan class A and Piche in the screen and in the free air occurred on the 19th., and the lowest values on the 29 th.

The daily mean of relative humidity was 5% above normal with maximum 99% on the 11th. and minimum 28% on the 12th.

The maximum wind speed at different levels occurred on the 20 th., and the minimum on the 7th.

The actual duration of bright sunshine was 69% of the possible duration with maximum 10.6 hours on the 7 th. and minimum 2.3 hours on the 16th.

TAHRIR — NOVEMBER 1964

During the first week, a moderately cool weather prevailed. This was followed by a warm spell with marked peak (34.0°C) on the 12 th. A marked drop in temperature occurred at the beginning of the 3 rd. week and a rather cold weather prevailed until the end of the month. This cold spell was associated with rain in the period between the 16th. and 21st.

The month was slightly cooler (-0.4°C) than last November, and apart from the slight excess in rainfall (2.6 mms. against 0.2 mm. last year), it was drier. The deviations of mean relative humidity and vapour pressure were (-8% and -0.5 mm.) respectively.

The deviations in mean wind speed at 2 metres, the mean Piche and pan A evaporations were ($+0.1$ m/sec., 0.0 mm. and (-0.45) mm. respectively. In spite of these irrelevant deviations, these elements reached on the 20th. the highest values for November since the station was established. Thus the day mean of wind speed at 2 metres above ground reached 9 m/sec. (about 18 knots), Pan A evaporation exceeded 10 mms. on that day; a value which is usually found in mid-summer.

Concerning certain wind speeds to be reached or exceeded for at least 5 continuous minutes : 35 knots was reported in one day; 20 knots was reported in six days; whereas this last case was not reached last year.

The extreme maximum soil temperatures were higher than those of last November by 1.2 to 2.6°C down to 20 cms. depth, the difference vanishing at 50 cms. depth and reversing sign in deeper layers. The extreme minima were less by 0.1 to 1.8°C between the surface and one metre depth.

GIZA — NOVEMBER 1964

The month was cooler and drier than normal ; the daily mean of air temperature at 2 metres above ground , the daily mean of relative humidity and the total amount of rainfall were below their normal values by 1.3°C, 4% and 1.9 mms. respectively.

A heat wave prevailed during the 2nd. week and attained a peak of 33.9°C on the 13th. (7.3°C above normal) which was the absolute maximum air temperature for the whole month. A prolonged cold wave followed the heat wave and lasted until the end of the month, yielding a peak of 18.1°C on the 22nd. (7.1°C below normal).

The extreme maxima of soil temperatures in the dry field at depths 0.3, 1 & 2 cms. were higher than the corresponding values of last November ; for 10 cms. and deeper layers, the values were lower, the maximum differences were +1.2°C at 0.3 cm. and -1.0°C at 100 cms. depth. The extreme minimum soil temperatures at 10 cms. depth and upper layers of dry field were higher than the corresponding values of last year, at deeper layers the values were lower, the maximum differences were +1.7°C at 0.3 cm. and -1.1°C at 50 cms. depth.

The mean wind speed at 2 metres above ground was higher than the corresponding values of last November by 0.7/m/sec.

The total actual duration of bright sunshine duration was lower than that of last year by 31 hours. The daily mean Piche evaporation, pan class A evaporation, potential evaporation and potential evapotranspiration for grass (Libia) were all higher than those of last year by 1.2, 0.07, 0.6 and 0.3 mms. respectively.

KHARGA — NOVEMBER 1964

This month was mild and rather dry as compared with the normal values of air temperature and relative humidity at 2 metres above ground level and also with respect to total rainfall.

During the period (8th. - 15th.) a warm spell prevailed. The maximum value of minimum air temperature at 5, 20 and 200 cms. above ground was 20.4°C (+ 6.2°C above normal). It was recorded on the 10th. which yielded the maximum daily, night and day time means of temperatures. The highest value of evaporation from pan class A and Piche in free air at different heights and in the screen was 26.4 mms. (+16.0 mms. above normal) and occurred also on the same day. The absolute value of air temperature at 2 metres was 36.5°C (+6.9 °C above normal) and was recorded on the 11th. as well as minimum values of water vapour pressure and relative humidity at 2 metres

(5% i.e. 45% below normal), which yielded the minimum daily mean relative humidity; also the maximum value of water vapour deficit was recorded on the same day. The maximum value of soil temperatures from 0.3 cm. up to 5 cms. were all recorded on the 13th., while that for 10 cms depth was recorded on the 11th. while for more depths, they were recorded at the beginning of the month.

A pronounced cold front passed on the 16th. when the maximum values of surface wind speed at heights 50, 100, 200, and 300 cms. were recorded and rain fell during night. On the 17th. the maximum value of water vapour pressure was recorded at 1300 U.T. The maximum value of relative humidity was 89% (+39% above normal) and was recorded on the 18th. at 1400 U.T. and water vapour deficit was minimum then.

The cold wave attained its peak round the 22nd. and the absolute minimum air temperature at heights 5, 20 and 200 cms. (5.8°C i.e. 6.0°C below normal) was recorded, which yielded the minimum value of daily, day and night time means of temperature on the 22nd; also both of surface wind speed and evaporation from pan class A and Piche in the screen and in the free air were all minimum on the 23rd. The minimum values of soil temperature from 0.3 cm. up to 5 cms. took place on the 22nd., while those for 10 and 20cms. were recorded on the 23rd ; for more depths, they were recorded at the end of the month. The minimum value of maximum air temperature (19.0°C i.e 8.4°C below normal), was recorded on the 24th.

The actual duration of bright sunshine was 94.6% of the possible duration .

The means of maximum, minimum and daily mean temperatures deviated from normal by -0.6°C, 0.5°C and 0.3 °C respectively.

The daily mean relative humidity was 9% below normal, though the mean of Piche evaporation in the screen was higher by 4.0 mms.

**TABLE C 1.—AIR TEMPERATURE AT 2 METRES ABOVE GROUND
NOVEMBER — 1964**

| STATION | Air Temperature (°C) | | | | | Mean Duration in hours of daily air temperature above the following values | | | | | | | | | | |
|-------------------|----------------------|-----------|-----------------|-----------------|---------------|--|------|------|------|------|------|------|------|------|------|------|
| | Mean Max. | Mean Min. | Mean of the day | Night time mean | Day time mean | -5°C | 0°C | 5°C | 10°C | 15°C | 20°C | 25°C | 30°C | 35°C | 40°C | 45°C |
| El Kasr | 23.3 | 13.3 | 18.0 | 16.3 | 20.3 | 24.0 | 24.0 | 24.0 | 24.0 | 16.3 | 7.2 | 0.3 | 0.0 | 0.0 | 0.0 | 0.0 |
| Tahrir | 25.1 | 12.9 | 18.2 | 16.0 | 20.7 | 24.0 | 24.0 | 24.0 | 24.0 | 17.0 | 7.7 | 2.1 | 0.2 | 0.0 | 0.0 | 0.0 |
| Giza | 25.5 | 12.2 | 18.3 | 16.5 | 20.7 | 24.0 | 24.0 | 24.0 | 23.9 | 17.4 | 8.0 | 2.2 | 0.3 | 0.0 | 0.0 | 0.0 |
| Kharga | 28.1 | 12.6 | 20.5 | 18.0 | 24.0 | 24.0 | 24.0 | 24.0 | 22.7 | 19.4 | 12.9 | 5.4 | 2.1 | 0.3 | 0.0 | 0.0 |

**TABLE C 2.—ABSOLUTE VALUES OF AIR TEMPERATURE AT 2 METRES ABOVE GROUND,
ABSOLUTE MINIMUM AIR TEMPERATURE AT 5cms ABOVE GROUND
OVER DIFFERENT FIELDS**

NOVEMBER — 1964

| STATION | Max. Temp. at 2 metres (°C) | | | | Min. Temp. at 2 metres (°C) | | | | Min. Temp. at 5 cms. above (°C) | | | |
|-------------------|-----------------------------|------|--------|------|-----------------------------|------|--------|-------|---------------------------------|-------|-------|------|
| | Highest | | Lowest | | Highest | | Lowest | | Dry soil | | Grass | |
| | Value | Date | Value | Date | Value | Date | Value | Date | Value | Date | Value | Date |
| El Kasr | 30.6 | 12 | 17.4 | 20 | 19.7 | 1 | 9.8 | 21 | 8.6 | 21 | — | — |
| Tahrir | 34.0 | 12 | 17.3 | 21 | 17.6 | 11 | 9.6 | 30 | 6.0 | 30 | — | — |
| Giza | 33.9 | 13 | 18.1 | 22 | 15.7 | 9 | 8.4 | 30 | 4.8 | 22 | 2.4 | 2.2 |
| Kharga | 36.5 | 11 | 19.0 | 24 | 20.4 | 10 | 5.8 | 22.23 | 3.8 | 22.23 | — | — |

**TABLE C 3.—(SOLAR + SKY) RADIATION, DURATION OF BRIGHT SUNSHINE, RELATIVE
HUMIDITY, VAPOUR PRESSURE AT 2 METRES, EVAPORATION & RAINFALL
NOVEMBER — 1964**

NOVEMBER 1964

| STATION | Solar+Sky Radiation gm. cal/cm ² | Duration of Bright Sunshine (hours) | | | Relative Humidity % | | | | | | Vapour pressure (mm) | | | | | | Evaporation (mm) | | Rainfall (mm) | | |
|---------|---|-------------------------------------|------------------------|----|---------------------|-------|-------------|-----------|--------|------|----------------------|---------|---------|------|--------|------|------------------|-------------|----------------------|----------------------|------|
| | | Total Actual monthly | Total Possible monthly | % | Duration in hours | | Mean of day | 1200 U.T. | Lowest | Date | Mean of day | 1200 UT | Highest | Date | Lowest | Date | Piche | Pan class A | Total Amount Monthly | Max. Fall in one day | Date |
| | | | | | > 90% | > 80% | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | |
| El Kasr | 257.3 | 219.0 | 317.5 | 69 | — | — | 76 | 59 | 28 | 12 | 11.5 | 11.9 | 18.1 | 12 | 5.8 | 16 | 9.0 | 5.49 | 18.6 | 11.0 | 23 |
| Tahrir | 329.9 | 277.7 | 318.8 | 71 | 5.2 | 9.7 | 72 | 48 | 23 | 12 | 11.1 | 10.5 | 17.4 | 10 | 5.6 | 20 | 7.8 | 4.61 | 2.6 | 0.8 | 21 |
| Giza | 295.0 | 235.0 | 319.7 | 73 | 2.5 | 6.8 | 67 | 44 | 14 | 13 | 10.4 | 9.7 | 15.7 | 9 | 5.1 | 13 | 8.9 | 4.42 | 0.6 | 0.4 | 16 |
| Kharga | 398.5 | 310.7 | 328.4 | 95 | 0 | 0 | 41 | 26 | 5 | 11 | 6.8 | 6.8 | 11.7 | 17 | 3.3 | 11 | 19.9 | 9.88 | 2.1 | 2.1 | 16 |

Table C 4.—EXTREME SOIL TEMPERATURE AT DIFFERENT DEPTHS (cms)
IN DIFFERENT FIELDS

NOVEMBER — 1964

[illegible]

Table C 5.—SURFACE WIND

NOVEMBER — 1964

[illegible]

PRINTED IN A.R.E. BY
THE GENERAL ORGANIZATION
FOR GOVT. PRINTING OFFICES. CAIRO
ALY SULTAN ALY
UNDER-SECRETARY OF STATE
Chairman of the Board of Directors



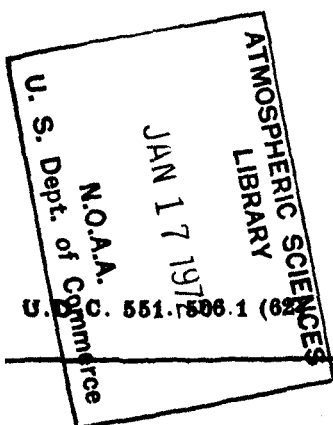
THE ARAB REPUBLIC OF EGYPT

MONTHLY WEATHER REPORT

VOLUME 7

NUMBER 12

DECEMBER, 1964



METEOROLOGICAL DEPARTMENT
CAIRO

PUBLICATIONS OF THE METEOROLOGICAL DEPARTMENT OF THE ARAB REPUBLIC OF EGYPT — CAIRO

In fulfilment of its duties, the Meteorological Department of Egypt issues several reports and publications on weather, climate and agrometeorology. The principal publications are described on this page.

Orders for publications should be addressed to :

"The Director General, Meteorological Department, Kubri-el-Qubbeh — CAIRO".

THE DAILY WEATHER REPORT

This report is issued daily by the Meteorological Department since the year 1901. It includes surface and upper air observations carried out by the relevant networks of the Republic at the principal hours of observations.

As from January 1968 this report was revised to include a condensed representative selection of surface and upper air observations besides the 1200 U.T. surface & 500 mb charts.

THE MONTHLY WEATHER REPORT

First issued in 1909, the Monthly Weather Report served to give a brief summary of the weather conditions that prevailed over Egypt during the month, with a table showing the mean values for few meteorological elements and their deviations from the normal values. From 1954 to 1957 this report was in a rapid state of development and extension resulting into a voluminous report on January 1958 giving surface, upper air, and agro-meteorological data for Egypt.

As from January 1964, the Monthly Weather Report was pressed to give climatological data for a representative selection of synoptic stations.

THE AGRO-METEOROLOGICAL ABRIDGED MONTHLY REPORT

Gives a review of weather experienced in the agro-meteorological stations of Egypt as well as monthly values of certain elements.

THE ANNUAL REPORT

This report gives annual values and statistics for the various meteorological elements, together with a summary of the weather conditions that prevailed during all months of the year.

CLIMATOLOGICAL NORMALS FOR EGYPT

A voluminous edition was issued in march 1968 which brings normals and mean values up till 1960.

METEOROLOGICAL RESEARCH BULLETIN

First issued in January 1969 on a bi-annual basis. It includes research works carried out by members of staff of "The Meteorological Institute for Research and Training" and the Operational Divisions of Meteorological Department.

TECHNICAL NOTES

As from October 1970, the Meteorological Department started to issue a new series of publications in the form of Technical Notes (non periodical) on subjects related to studies and applications of meteorology in different fields for the benefit of personnel working in these fields.

The first Technical Note I was issued in October 1970 on : Sandstorms & Duststorms in Egypt.



THE ARAB REPUBLIC OF EGYPT

MONTHLY WEATHER REPORT

VOLUME 7

NUMBER 12

DECEMBER, 1964

U.D.C. 551, 506.1 (82)

METEOROLOGICAL DEPARTMENT
CAIRO

CONTENTS

| | PAGES |
|--|-------|
| Genral Summary of Weather Conditions | 1-2 |

SURFACE DATA

| | |
|--|-----|
| Table A1.—Monthly values of the Atmospheric Pressure, Air Temperature, Relative Humidity, Bright Sunshine Duration and Piche Evaporation | 3 |
| „ A2.—Maximum and Minimum Air Temperatures | 4 |
| „ A3.—Sky Cover and Rainfall | 5 |
| „ A4.—Number of Days of Occurrence of Miscellaneous Weather Phenomena | 6 |
| „ A5.—Number in Hours of Occurrences of Concurrent Surface Wind Speed and Direction Recorded Within Specified Ranges | 7,8 |

UPPER AIR DATA

| | |
|--|-------|
| Table B1.—Monthly Means and Monthly Absolute Higher & Lower Values of Altitude, air Temperature & Dew point at Standard and Selected Pressure Surfaces | 9,10 |
| „ B2.—Mean and Extreme values of The Freezing Level and The Tropopause; The Highest Wind Speed in The Upper Air | 11 |
| „ B3.—Number of Occurreneces of Wind Direction Within Specified Ranges and The Mean Scalar Wind Speed at the Standard and Selected Pressure Surfaces | 12-14 |

AGRO-METEOROLOGICAL DATA

| | |
|--|-------|
| Reviews of Agro-meteorological stations | 15-17 |
| Table C1.—Air Temperature at 2 Metres Above Ground | 18 |
| „ C2.—Absolute Values, of Air Temperature at 2 Metres Above Ground, Absolute Minimum Air Temperature at 5 Cms Above Ground Over Different Fields | 18 |
| „ C3.—(Solar + Sky) Radiation, Duration of Bright Sunshine, Relative Humidity and Vapour Pressure at 2 Metres Above Ground, Evaporation and Rainfall | 18 |
| „ C4.—Extreme Soil Temperature at Different Depths in Different Fields | 19 |
| „ C5.—Surface wind | 19 |

Note For explanatory notes on tables please refer to Volume 7, Number 1 (January 1964).

GENERAL SUMMARY OF WEATHER CONDITIONS

DECEMBER 1964

Generally cold with an intense cold and rainy spell during the 2nd week. Occasional thunderstorms and destructive floods in scattered localities of the northern parts. Early morning mist and fog over scattered localities of Delta, Canal and Cairo areas.

GENERAL DESCRIPTION OF WEATHER

During this month, the prevailing weather was generally cold though interlarded with short warm spells. Weather was markedly cold and rainy during the second week over the northern and middle parts of the Republic, where destructive floods overrun scattered localities in Mediterranean (Ras El Hikma) and Lower Egypt (Beheira province) districts and the monthly rainfall exceeded highly its normal. Rain was associated with occasional thunderstorms and hail over scattered places.

Early morning mist and fog developed frequently during the 1st week and 2nd half of the month over Delta, Canal and Cairo areas, and extended southwards through the northern parts of Upper Egypt district (Minya).

PRESSURE DISTRIBUTION

The prevailing pressure distributions over the surface map this month can be summarized in the following pressure systems.

- The Siberian anticyclonic ridge over Southwest Russia.
- The Azores anticyclonic ridge over western parts of Europe and Africa.
- The deep northern Atlantic low pressure systems through Europe and Russia.
- The Mediterranean transitory secondary depressions.

During most of this month, the Siberian anticyclonic ridge over southwest Russia was rather stationary and operated over east Mediterranean and Asia Minor. As an exception four Mediterranean minor secondary depressions penetrated eastwards through east Mediterranean round the 5th, 14th, 23rd and 29th respectively.

The first minor secondary depression started on the 2nd from west Mediterranean, reached central Mediterranean on the 3rd, then shot NE wards through Balkans on the 4th, while a minor shallow secondary formed over Mediterranean Egyptian coast and traversed east Mediterranean on the 5th.

The second minor secondary depression developed over Greece on the 5th, preceded slowly eastwards and reached Cyprus on the 8th where it was stationary till the 14th.

The third minor secondary depression developed over central Mediterranean on the 21st and overrun east Mediterranean by the 23rd following an eastward track.

The fourth and last minor secondary depression during this month developed over Libya on the 25th and was attached to a rather deep central Mediterranean depression. The Mediterranean deep depression followed a NE track through Balkans and Russia while the shallow minor secondary proceeded eastwards, traversed Cyrenica by the 27th, Egypt by 28th and east Mediterranean by the 29th.

- 2 -

According to the transit of the above mentioned secondary depressions the barometric pressure over Egypt experienced four pronounced oscillations.

The polar jet stream was evident in association with travelling Mediterranean depressions in the upper troposphere round 295 mb level north of latitude 30°N, while the subtropical jet stream appeared most of the month over the country at about 195 mb level.

The highest wind speeds recorded at Mersa Matruh, Helwan & Aswan were 172, 158 & 141 Knots on the 31st, 31st, & 10th respectively.

SURFACE WIND

The prevailing winds were light/moderate NWly & NEly in general but became fresh/strong occasionally during the 1st half of the month. Winds backed to SEly, SWly far in advance and just before secondary depressions transits over the Republic.

Gales were reported at Sidi Barrani, Mersa Matruh & Alexandria on the 9th; Ras El Teen on the 8th & 9th and at Fayed, on the 4th & 10th.

TEMPERATURE

Maximum air temperature was subnormal during the second and third weeks, particularly during the second week when it was

appreciably below normal. During rest of the month, maximum air temperature showed slight to moderate departures above normal.

The absolute maximum temperature for the Republic was 32.2°C reported at Dakhla on the 4th.

Minimum air temperature was slightly subnormal in general.

The absolute minimum temperature for the Republic was - 0.3°C reported at Dakhla on the 21st.

PRECIPITATION

This month was characterized by a heavy rainy period of long duration between 4th & 16th and a light rainy period of short duration between the 22nd & 24th. During both periods rain was confined to the northern and middle parts north of Beni Suef's latitude. During the 1st rainy period rain was abnormally heavy and associated with thunderstorms and hail over scattered places. The daily rainfall was appreciably large and exceeded 10 mms in many localities for many days of this period. The monthly rain exceeded highly its normal over the Mediterranean & Lower Egypt districts.

The absolute daily rainfall was 72.4 mms. reported at Ras El Hikma on the 10th.

The absolute monthly rain for the Republic was 171.0 mms reported at Kafr El Dawar.

Cairo, September 1971

M. F. TAHA
Under Secretary of State
Director General
Meteorological Department

SURFACE DATA

Table A 1. — MONTHLY VALUES OF THE ATMOSPHERIC PRESSURE, AIR TEMPERATURE, RELATIVE HUMIDITY, BRIGHT SUNSHINE DURATION & PICHE EVAPORATION.

DECEMBER - 1964

| STATION | Atmospheric Pressure (mbs) M.S.L | | Air Temperature °C | | | | | | | | | Relative Humidity % | | Bright Sunshine Duration (Hours) | | | Piche Evap- (mm) Mean |
|-----------------------|-------------------------------------|------------------------------|--------------------|---------------------------|-------------|---------------------------|----------|------|---------------------------|------|---------------------------|------------------------|---------------------------|-------------------------------------|-------------------|------|--------------------------------|
| | | | Maximum | | Minimum | | Dry Bulb | | Wet Bulb | | | | | | | | |
| | Mean | D.F. Normal or Average | (A) Mean | D.F. Normal or Average | (B) Mean | D.F. Normal or Average | A+B 2 | Mean | D.F. Normal or Average | Mean | D.F. Normal or Average | Mean | D.F. Normal or Average | Total Actual | Total Possible | % | |
| Sallum | 1017.8 | +0.4 | 20.7 | +0.1 | 12.7 | +1.1 | 16.7 | 16.1 | +0.4 | 12.1 | +0.3 | 59 | - 1 | — | — | — | 6.1 |
| Mersa Matruh . (A) | 1018.2 | +0.4 | 19.8 | +0.1 | 10.4 | +0.4 | 15.1 | 14.6 | +0.2 | 11.7 | +0.2 | 69 | + 1 | 197.0 | 313.7 | 62.8 | 5.5 |
| Alexandria . . (A) | 1017.7 | +0.1 | 20.3 | -0.1 | 10.1 | -1.1 | 15.2 | 15.0 | -0.2 | 12.6 | -0.1 | 74 | + 0 | 190.9 | 315.6 | 60.5 | 3.3 |
| Port Said . . . (A) | 1017.5 | 0.0 | 19.9 | 0.0 | 12.9 | - 0.8 | 16.4 | 16.1 | -0.3 | 13.7 | 0.0 | 75 | + 1 | 221.0 | 315.6 | 70.0 | 3.7 |
| El Arish | 1017.8 | +0.6 | 20.7 | -0.7 | 10.4 | +0.3 | 15.6 | 14.9 | -0.9 | 12.1 | -0.4 | 70 | + 4 | 215.0 | 315.5 | 68.1 | 4.9 |
| Ghazza | 1017.6 | +0.6 | 19.4 | - 0.9 | 10.8 | -1.2 | 15.1 | 15.0 | -0.8 | 11.8 | -0.9 | 66 | - 2 | 206.3 | 313.7 | 65.8 | 4.9 |
| Tanta | 1017.4 | — | 20.9 | — | 8.6 | — | 14.8 | 14.0 | — | 11.2 | — | 69 | — | 198.1 | 316.8 | 62.5 | 2.1 |
| Cairo (A) | 1017.8 | -0.3 | 20.6 | -0.1 | 10.3 | -0.1 | 15.4 | 15.3 | 0.0 | 11.2 | -0.6 | 58 | - 6 | — | — | — | 7.6 |
| Fayoum | 1017.8 | — | 21.4 | — | 8.5 | — | 15.0 | 14.0 | — | 10.9 | — | 66 | — | — | — | — | 3.6 |
| Minya (A) | 1018.7 | +0.5 | 21.5 | -0.5 | 6.9 | -0.2 | 14.2 | 14.1 | +0.3 | 10.8 | +0.6 | 64 | + 3 | — | — | — | 4.3 |
| Assyout (A) | 1018.2 | +0.3 | 22.5 | +0.1 | 8.9 | 0.0 | 15.7 | 15.1 | -0.4 | 10.3 | -0.3 | 51 | + 1 | — | — | — | 8.2 |
| Luxor (A) | 1017.2 | +0.4 | 25.0 | +0.2 | 7.8 | +0.1 | 16.4 | 16.0 | +1.2 | 11.2 | -0.2 | 52 | - 1 | — | — | — | 4.8 |
| Aswan (A) | 1017.3 | +1.1 | 25.2 | -1.3 | 9.6 | -3.6 | 17.4 | 17.3 | -0.9 | 11.0 | -0.1 | 41 | + 5 | — | — | — | 8.9 |
| Siwa | 1018.3 | -0.4 | 21.6 | +0.3 | 8.1 | +2.1 | 14.8 | 14.2 | +0.6 | 9.5 | +0.2 | 50 | - 7 | — | — | — | 7.4 |
| Bahariya | 1018.4 | +1.1 | 22.9 | +0.2 | 7.6 | +0.1 | 15.2 | 14.7 | -0.3 | 8.9 | -0.6 | 51 | 0 | — | — | — | 2.9 |
| Farafra | 1019.9 | — | 22.8 | — | 6.6 | — | 14.7 | 14.1 | — | 7.9 | — | 35 | — | — | — | — | 7.3 |
| Dakhla | 1016.9 | +0.3 | 24.7 | -2.4 | 4.3 | -2.3 | 14.5 | 13.7 | -0.7 | 8.4 | -0.6 | 43 | 0 | — | — | — | 7.4 |
| Kharga | 1018.4 | — | 24.6 | — | 8.3 | — | 16.4 | 16.4 | — | 9.6 | — | 35 | — | 301.9 | 329.5 | 91.9 | 10.4 |
| Tor | 1017.4 | +1.3 | 22.5 | -0.6 | 11.3 | +0.7 | 16.9 | 16.8 | -0.9 | 12.4 | -0.7 | 57 | + 1 | — | — | — | 5.8 |
| Hurgada | 1017.2 | +0.9 | 22.8 | +0.4 | 10.7 | -1.2 | 16.8 | 16.7 | -0.8 | 11.9 | -1.2 | 53 | - 4 | — | — | — | 10.0 |
| Quseir | 1017.4 | +1.6 | 23.2 | -0.9 | 14.8 | -1.1 | 19.0 | 19.0 | -1.3 | 13.9 | -2.0 | 53 | 0 | — | — | — | 11.0 |

Table A2.— MAXIMUM AND MINIMUM AIR TEMPERATURES

DECEMBER — 1964

| Station | Maximum Temperature °C | | | | | | | | | Grass Min. Temp. | | Minimum Temperature °C | | | | | | | | |
|----------------------------|------------------------|------|--------|------|----------------------------|-----|-----|-----|-----|------------------|----------------|------------------------|-------|--------|------|-----------------------------|----|----|-----|--|
| | Highest | Date | Lowest | Date | No. of Days with Max-Temp. | | | | | Mean | D. From Normal | Highest | Date | Lowest | Date | No. of Days with Min. Temp. | | | | |
| | | | | | >25 | >30 | >35 | >40 | >45 | | | | | | | <10 | <5 | <0 | <-5 | |
| Sallum | 26.2 | 27 | 16.2 | 8.9 | 2 | 0 | 0 | 0 | 0 | 11.6 | — | 16.4 | 27 | 9.2 | 6 | 4 | 0 | 0 | 0 | |
| Mersa Maitruh. (A) | 26.0 | 4 | 14.2 | 9 | 1 | 0 | 0 | 0 | 0 | — | — | 13.2 | 29 | 9.6 | 8 | 1 | 0 | 0 | 0 | |
| Alexandra (A) | 24.8 | 28 | 14.6 | 9 | 0 | 0 | 0 | 0 | 0 | — | — | 14.2 | 23 | 7.5 | 6 | 18 | 0 | 0 | 0 | |
| Port Said (A) | 24.1 | 4 | 14.3 | 9 | 0 | 0 | 0 | 0 | 0 | 11.3 | — | 16.3 | 26.30 | 8.5 | 9 | 2 | 0 | 0 | 0 | |
| El Arish | 28.0 | 29 | 16.2 | 10 | 3 | 0 | 0 | 0 | 0 | 8.8 | — | 15.0 | 4 | 6.5 | 20 | 12 | 0 | 0 | 0 | |
| Ghazza | 28.4 | 4 | 15.2 | 10 | 2 | 0 | 0 | 0 | 0 | 10.2 | — | 18.8 | 4 | 7.7 | 20 | 11 | 0 | 0 | 0 | |
| Tanta. | 25.3 | 28 | 13.9 | 9 | 1 | 0 | 0 | 0 | 0 | — | — | 11.8 | 23 | 5.8 | 27 | 24 | 0 | 0 | 0 | |
| Cairo (A) | 26.8 | 28 | 15.2 | 9.11 | 2 | 0 | 0 | 0 | 0 | — | — | 15.6 | 29 | 7.2 | 20 | 16 | 0 | 0 | 0 | |
| Fayoum | 25.6 | 28 | 15.6 | 9 | 1 | 0 | 0 | 0 | 0 | 5.2 | — | 12.3 | 30 | 5.6 | 20 | 25 | 0 | 0 | 0 | |
| Minya (A) | 28.0 | 2 | 17.1 | 9 | 8 | 0 | 0 | 0 | 0 | 3.7 | — | 12.5 | 4 | 4.0 | 6 | 27 | 6 | 0 | 0 | |
| Assyout. (A) | 29.5 | 3 | 16.8 | 9 | 9 | 0 | 0 | 0 | 0 | 6.3 | — | 13.0 | 30 | 5.4 | 20 | 23 | 0 | 0 | 0 | |
| Luxor. (A) | 31.0 | 3 | 18.4 | 9 | 17 | 1 | 0 | 0 | 0 | 7.3 | — | 12.0 | 7 | 5.0 | 20 | 24 | 0 | 0 | 0 | |
| Aswan (A) | 31.3 | 4 | 18.2 | 10 | 14 | 4 | 0 | 0 | 0 | — | — | 15.2 | 7 | 5.5 | 10 | 17 | 0 | 0 | 0 | |
| Siwa | 28.1 | 28 | 16.7 | 9 | 3 | 0 | 0 | 0 | 0 | — | — | 15.3 | 29 | 0.8 | 6 | 24 | 4 | 0 | 0 | |
| Bahariya | 32.0 | 29 | 15.1 | 9 | 8 | 2 | 0 | 0 | 0 | — | — | 14.5 | 4 | 2.8 | 6 | 24 | 6 | 0 | 0 | |
| Farafra. | 31.2 | 29 | 15.8 | 9 | 10 | 3 | 0 | 0 | 0 | — | — | 14.2 | 4 | 1.9 | 20 | 29 | 9 | 0 | 0 | |
| Dakhja | 32.2 | 4 | 17.0 | 9 | 15 | 5 | 0 | 0 | 0 | — | — | 10.9 | 5 | -0.3 | 21 | 30 | 19 | 1 | 0 | |
| Kharga | 30.9 | 3 | 17.5 | 9 | 14 | 4 | 0 | 6 | 0 | — | — | 15.0 | 3 | 3.8 | 10 | 22 | 4 | 0 | 0 | |
| Tor. | 26.6 | 1.3 | 17.9 | 9 | 5 | 0 | 0 | 0 | 0 | — | — | 18.2 | 31 | 8.0 | 20 | 10 | 0 | 0 | 0 | |
| Hurg hada. | 26.6 | 3 | 19.7 | 10 | 7 | 0 | 0 | 0 | 0 | — | — | 13.8 | 6 | 7.9 | 21 | 14 | 0 | 0 | 0 | |
| Qusetr | 26.2 | 4 | 20.3 | 15 | 5 | 0 | 0 | 0 | 0 | — | — | 18.1 | 6 | 10.1 | 11 | 0 | 0 | 0 | 0 | |

Table A 3.—SKY COVER AND RAINFALL

DECEMBER -- 1964

| Station | Mean Sky Cover Oct. | | | | | Rainfall mms. | | | | | | | | | | | |
|----------------------------|---------------------|-----|-----|-----|-------|---------------|---------|------------|---------|------------------------------------|------|------|--------|--------|--------|------|------|
| | 00 | 06 | 12 | 18 | Daily | Total | D. From | Max. Fall | | Number of Days with Amount of Rain | | | | | | | |
| | | | | | | | | in one day | | | | | | | | | |
| | | | | | | | | U.T. | U.T. | U.T. | U.T. | Mean | Amount | Normal | Amount | Date | <0.1 |
| Sallum (A) | 4.1 | 5.2 | 5.6 | 3.9 | 4.6 | 22.7 | + 2.3 | 12.2 | 10 | 2 | 10 | 4 | 1 | 1 | 0 | 0 | |
| Mersa Matruh (A) | 3.1 | 4.2 | 4.7 | 3.5 | 4.0 | 63.4 | +24.7 | 17.3 | 11 | 1 | 10 | 9 | 5 | 3 | 0 | 0 | |
| Alexandria (A) | 3.9 | 4.8 | 5.0 | 4.2 | 4.4 | 120.5 | +74.3 | 22.9 | 8 | 1 | 11 | 9 | 7 | 6 | 0 | 0 | |
| Port Said (A) | 2.6 | 3.1 | 3.1 | 2.6 | 2.6 | 10.8 | - 6.9 | 5.9 | 31 | 1 | 8 | 3 | 1 | 0 | 0 | 0 | |
| El Arish | 4.0 | 4.2 | 3.6 | 4.4 | 3.0 | 26.1 | + 5.3 | 17.4 | 15 | 1 | 9 | 3 | 2 | 1 | 0 | 0 | |
| Ghazza | 2.9 | 3.7 | 4.3 | 2.9 | 2.4 | 78.2 | + 6.7 | 35.4 | 13 | 2 | 9 | 8 | 4 | 2 | 1 | 0 | |
| Tanta | — | 2.5 | 3.9 | 4.1 | — | 25.5 | +15.8 | 7.7 | 9 | 0 | 9 | 7 | 2 | 0 | 0 | 0 | |
| Cairo (A) | 1.7 | 3.6 | 4.4 | 2.2 | 3.0 | 5.4 | - 3.2 | 2.1 | 9 | 1 | 4 | 3 | 0 | 0 | 0 | 0 | |
| Fayoum | — | 1.5 | 2.6 | 1.4 | — | tr. | - 5.1 | tr. | * | 5 | 0 | 0 | 0 | 0 | 0 | 0 | |
| Minya (A) | 1.1 | 2.4 | 2.7 | 1.2 | 1.8 | tr. | - 0.8 | ta. | 12.29 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | |
| Assyout (A) | 1.0 | 1.6 | 2.8 | 1.6 | 1.6 | tr. | - 0.0 | tr. | 11 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | |
| Luxor (A) | 0.8 | 0.9 | 2.0 | 1.4 | 1.9 | 0.0 | - 0.1 | 0.0 | — | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| Aswan | 0.9 | 1.2 | 1.7 | 0.7 | 1.2 | 0.0 | - Tr. | 0.0 | — | 0 | 0 | 0 | 0 | 0 | 0 | 9 | |
| Siwa | 2.0 | 3.5 | 3.5 | 2.0 | 2.3 | tr. | - 2.4 | tr. | 4,22,28 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | |
| Bahariya | 1.3 | 2.2 | 3.2 | 2.1 | 2.1 | 0.0 | - 1.3 | 0.0 | — | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| Farafra | 1.0 | 1.6 | 2.9 | 1.3 | 1.9 | 0.6 | + 0.6 | 0.6 | 24 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | |
| Dakhla | 0.7 | 1.4 | 1.6 | 0.9 | 0.7 | 0.0 | - 0.1 | 0.0 | — | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| Kharga | 0.8 | 1.5 | 2.1 | 1.1 | 1.3 | 0.0 | - 0.4 | 0.0 | — | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| Tor | 1.6 | 2.2 | 2.5 | 1.9 | 2.1 | 5.5 | + 2.3 | 5.3 | 11 | 0 | 2 | 1 | 1 | 0 | 0 | 0 | |
| Hurghada | 1.0 | 1.3 | 2.1 | 1.4 | 1.3 | 0. | - 2.8 | 0.0 | — | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| Quseir | 0.8 | 1.4 | 2 | 1.4 | 1.4 | 0 | - 0.2 | 0.0 | — | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |

* More than 3 days

Table A 4. — DAYS OF OCCURRENCE OF MISCELLANEOUS WEATHER PHENOMENA.

DECEMBER — 1964

| Station | Precipitation | | | | Frost | Thunderstorm, | Mist Vis ≥ 1000 metres | Fog Vis < 1000 Metres | Haze Vis ≥ 1000 Metres | Thick Haze Vis < 1000 Metres | Dust or Sandblowing Vis ≥ 1000 Metres | Dust or Sandstorm Vis < 1000 Metres | Gale | Clear Sky | Cloudy Sky |
|----------------------------|---------------|------|--------------|------|-------|---------------|-----------------------------|-------------------------|-----------------------------|--------------------------------|--|---------------------------------------|------|-----------|------------|
| | Rain | Snow | Ice, Pellets | Hail | | | | | | | | | | | |
| Saltum | 10 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 4 | 0 | 0 | 3 | 10 |
| Mersa Matruh (A) | 10 | 0 | 0 | 0 | 0 | 4 | 0 | 0 | 0 | 0 | 3 | 1 | 1 | 5 | 5 |
| Alexandria (A) | 11 | 0 | 0 | 1 | 0 | 6 | 2 | 9 | 2 | 0 | 0 | 0 | 1 | 5 | 9 |
| Port Said (A) | 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 10 | 1 |
| El Arish | 9 | 0 | 0 | 0 | 0 | 0 | 10 | 0 | 5 | 0 | 7 | 0 | 0 | 5 | 7 |
| Ghazze | 9 | 0 | 0 | 0 | 0 | 4 | 1 | 0 | 4 | 0 | 0 | 0 | 0 | 11 | 5 |
| Tanta | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | — | — |
| Cairo (A) | 4 | 0 | 0 | 0 | 0 | 0 | 12 | 1 | 16 | 0 | 5 | 1 | 0 | 10 | 0 |
| Fayoum | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | — | — |
| Minya (A) | 0 | 0 | 0 | 0 | 0 | 0 | 13 | 2 | 6 | 0 | 2 | 0 | 0 | 19 | 0 |
| Assyout (A) | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 7 | 0 | 4 | 0 | 0 | 18 | 0 |
| Luxor (A) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 13 | 0 | 1 | 0 | 0 | 22 | 0 |
| Aswan (A) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 3 | 0 | 0 | 24 | 0 |
| Siwa | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 11 | 0 |
| Behariya | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 0 | 17 | 2 |
| Farafra | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 3 | 0 | 0 | 13 | 1 |
| Dakhla | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 23 | 0 |
| Kharga | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 20 | 0 |
| Tor | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 10 | 1 |
| Hurghada | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 20 | 0 |
| Quseir | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 3 | 0 | 2 | 0 | 0 | 21 | 1 |

**Table A 5.—NUMBER IN HOURS OF OCCURRENCES OF CONCURRENT SURFACE
WIND SPEED AND DIRECTION RECORDED WITHIN SPECIFIED RANGES
DECEMBER — 1964**

| Station | calm (hours) | Variable (hours) | Unrecorded (hours) | Wind speed in knots | Number in hours of occurrences of wind blowing from the ranges of directions indicated | | | | | | | | | | | | | |
|--------------------------|--------------|------------------|--------------------|------------------------|---|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|----------------|--|
| | | | | | 345 | 015 | 045 | 075 | 105 | 135 | 165 | 195 | 225 | 255 | 285 | 315 | All directions | |
| | | | | | / | / | / | / | / | / | / | / | / | / | / | / | | |
| | | | | | 014 | 044 | 074 | 104 | 134 | 164 | 194 | 224 | 254 | 284 | 314 | 344 | | |
| Sallum | 62 | 0 | 0 | 1-10 | 15 | 36 | 15 | 36 | 31 | 46 | 35 | 8 | 15 | 62 | 52 | 48 | 399 | |
| | | | | 11-27 | 4 | 0 | 0 | 0 | 0 | 6 | 13 | 23 | 19 | 74 | 123 | 20 | 282 | |
| | | | | 28-47 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | |
| | | | | ≥48 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| | | | | All speeds | 19 | 36 | 15 | 36 | 31 | 52 | 48 | 31 | 34 | 136 | 176 | 68 | 682 | |
| Meras Matruh . . . (A) | 12 | 0 | 4 | 1-10 | 30 | 20 | 26 | 19 | 51 | 64 | 47 | 41 | 55 | 43 | 24 | 40 | 460 | |
| | | | | 11-27 | 21 | 1 | 0 | 0 | 13 | 22 | 20 | 17 | 27 | 57 | 34 | 48 | 260 | |
| | | | | 28-47 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 7 | 8 | |
| | | | | ≥48 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| | | | | All speeds | 51 | 21 | 26 | 19 | 64 | 86 | 67 | 58 | 82 | 101 | 58 | 95 | 728 | |
| Alexandria (A) | 79 | 0 | 0 | 1-10 | 43 | 47 | 42 | 61 | 55 | 35 | 22 | 52 | 19 | 10 | 20 | 46 | 452 | |
| | | | | 11-27 | 14 | 14 | 3 | 3 | 6 | 4 | 5 | 32 | 21 | 15 | 43 | 49 | 209 | |
| | | | | 28-47 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 1 | 0 | 0 | 0 | 4 | |
| | | | | ≥48 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| | | | | All speeds | 57 | 61 | 45 | 64 | 61 | 39 | 27 | 87 | 41 | 25 | 63 | 95 | 665 | |
| Port Said (A) | 1 | 11 | 0 | 1-10 | 16 | 61 | 58 | 34 | 44 | 43 | 56 | 37 | 71 | 50 | 42 | 50 | 562 | |
| | | | | 11-27 | 9 | 17 | 4 | 1 | 0 | 0 | 6 | 52 | 70 | 8 | 1 | 2 | 170 | |
| | | | | 28-47 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| | | | | ≥48 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| | | | | All speeds | 25 | 78 | 62 | 35 | 44 | 43 | 62 | 89 | 141 | 58 | 43 | 52 | 732 | |
| Ghazza | 1 | 77 | 15 | 1-10 | 21 | 22 | 16 | 32 | 64 | 169 | 66 | 22 | 22 | 18 | 28 | 34 | 514 | |
| | | | | 11-27 | 0 | 1 | 0 | 0 | 5 | 41 | 34 | 25 | 11 | 19 | 9 | 2 | 137 | |
| | | | | 28-47 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| | | | | ≥48 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| | | | | All speeds | 21 | 23 | 16 | 32 | 69 | 210 | 100 | 47 | 33 | 27 | 37 | 36 | 651 | |
| Tanta | 124 | 19 | 3 | 1-10 | 18 | 11 | 59 | 48 | 44 | 24 | 22 | 49 | 134 | 76 | 47 | 49 | 581 | |
| | | | | 11-27 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 16 | 0 | 0 | 0 | 17 | |
| | | | | 28-47 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| | | | | ≥48 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| | | | | All speeds | 18 | 11 | 59 | 48 | 44 | 24 | 22 | 50 | 150 | 76 | 47 | 49 | 598 | |
| Cairo (A) | 31 | 15 | 26 | 1-10 | 13 | 61 | 58 | 66 | 44 | 9 | 16 | 51 | 31 | 34 | 32 | 35 | 450 | |
| | | | | 11-27 | 0 | 10 | 20 | 7 | 8 | 9 | 29 | 48 | 39 | 31 | 13 | 8 | 222 | |
| | | | | 28-47 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| | | | | ≥48 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| | | | | All speeds | 13 | 71 | 78 | 73 | 52 | 18 | 45 | 99 | 70 | 65 | 45 | 43 | 672 | |
| Fayoum | 38 | 0 | 211 | 1-10 | 122 | 32 | 8 | 8 | 8 | 21 | 34 | 76 | 39 | 41 | 21 | 72 | 482 | |
| | | | | 11-27 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 11 | 1 | 0 | 0 | 13 | |
| | | | | 28-47 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| | | | | ≥48 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| | | | | All speeds | 122 | 32 | 8 | 8 | 8 | 21 | 34 | 77 | 50 | 42 | 21 | 72 | 495 | |

**Table A 5 (contd.)—NUMBER IN HOURS OF OCCURRENCE OF CONCURRENT SURFACE
WIND SPEED AND DIRECTION RECORDED WITHIN SPECIFIED RANGES**

DECEMBER -- 1964

| Station | calm (hours) | Variable (hours) | Unrecorded (hours) | Wind speed in knots | Number in hours of occurrences of wind blowing from the ranges of directions indicated | | | | | | | | | | | | | All directions |
|----------------------|--------------|------------------|--------------------|------------------------|---|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|----------------|
| | | | | | 345 | 015 | 045 | 075 | 105 | 135 | 165 | 195 | 225 | 255 | 285 | 315 | | |
| | | | | | / | / | / | / | / | / | / | / | / | / | / | / | | |
| | | | | | 014 | 044 | 074 | 104 | 134 | 164 | 194 | 224 | 254 | 284 | 314 | 344 | | |
| Minya (A) | 0 | 28 | 81 | 1-10 | 157 | 46 | 3 | 0 | 8 | 45 | 43 | 8 | 28 | 39 | 33 | 153 | 563 | |
| | | | | 11-27 | 12 | 10 | 1 | 0 | 0 | 1 | 1 | 0 | 4 | 26 | 10 | 7 | 72 | |
| | | | | 28-47 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| | | | | ≥48 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| | | | | All speeds | 169 | 56 | 4 | 0 | 8 | 46 | 44 | 8 | 32 | 65 | 43 | 160 | 635 | |
| Assyout. (A) | 15 | 0 | 0 | 1-10 | 0 | 22 | 14 | 40 | 39 | 31 | 14 | 13 | 71 | 216 | 127 | 23 | 610 | |
| | | | | 11-27 | 0 | 0 | 0 | 1 | 4 | 7 | 0 | 0 | 37 | 27 | 37 | 6 | 119 | |
| | | | | 28-47 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| | | | | ≥48 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| | | | | All speeds | 0 | 22 | 14 | 41 | 43 | 38 | 14 | 13 | 108 | 243 | 164 | 29 | 729 | |
| Luxor (A) | 5 | 0 | 0 | 1-10 | 40 | 102 | 72 | 48 | 43 | 40 | 73 | 65 | 32 | 25 | 40 | 99 | 679 | |
| | | | | 11-27 | 0 | 0 | 2 | 2 | 0 | 0 | 0 | 0 | 14 | 4 | 9 | 29 | 60 | |
| | | | | 28-47 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| | | | | ≥48 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| | | | | All speeds | 40 | 102 | 74 | 50 | 43 | 40 | 73 | 65 | 46 | 29 | 49 | 128 | 739 | |
| Aswan (A) | 5 | 0 | 0 | 1-10 | 381 | 118 | 16 | 11 | 4 | 3 | 2 | 8 | 15 | 34 | 33 | 84 | 709 | |
| | | | | 11-27 | 20 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 4 | 30 | |
| | | | | 28-47 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| | | | | ≥48 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| | | | | All speeds | 401 | 118 | 16 | 11 | 4 | 3 | 2 | 8 | 15 | 34 | 39 | 88 | 739 | |
| Siwa | 105 | 0 | 0 | 1-10 | 0 | 7 | 12 | 41 | 54 | 37 | 23 | 56 | 15 | 172 | 42 | 36 | 495 | |
| | | | | 11-27 | 0 | 0 | 0 | 3 | 3 | 10 | 7 | 17 | 7 | 51 | 39 | 7 | 144 | |
| | | | | 28-47 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| | | | | ≥48 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| | | | | All speeds | 0 | 7 | 12 | 44 | 57 | 47 | 30 | 73 | 22 | 223 | 81 | 43 | 639 | |
| Hurghada | 7 | 8 | 20 | 1-10 | 29 | 26 | 12 | 6 | 18 | 9 | 6 | 3 | 9 | 72 | 107 | 35 | 332 | |
| | | | | 11-27 | 20 | 0 | 0 | 0 | 1 | 4 | 1 | 0 | 0 | 77 | 181 | 93 | 377 | |
| | | | | 28-47 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| | | | | ≥48 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| | | | | All speeds | 49 | 26 | 12 | 6 | 19 | 13 | 7 | 3 | 9 | 149 | 288 | 128 | 709 | |
| Quseir | 0 | 0 | 50 | 1-10 | 37 | 20 | 4 | 1 | 4 | 2 | 3 | 12 | 133 | 106 | 88 | 79 | 489 | |
| | | | | 11-27 | 12 | 1 | 0 | 0 | 0 | 0 | 1 | 3 | 31 | 24 | 61 | 72 | 205 | |
| | | | | 28-47 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| | | | | ≥48 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| | | | | All speeds | 49 | 21 | 4 | 1 | 4 | 2 | 4 | 15 | 164 | 130 | 149 | 151 | 694 | |

UPPER AIR CLIMATOLOGICAL DATA

Table B1 MONTHLY MEANS AND MONTHLY ABSOLUTE HIGHER & LOWER VALUES OF ALTITUDE, AIR TEMPERATURE & DEW POINT AT STANDARD AND SELECTED PRESSURE SURFACES

DECEMBER - 1964

| Station | Pressure Surface (Millibars) | Altitude of Pressure Surface (moms) | | | | Temperature (°C) | | | | Dew Point (°C) | |
|----------------------------|---------------------------------|-------------------------------------|----------|----------|----------|------------------|-------|---------|--------|----------------|-------|
| | | N | Mean | Highest | Lowest | N | Mean | Highest | Lowest | N | Mean |
| Nersa Matruh (A) 1000 U.T. | Surface | 23 | 1018m.b. | 1023m.b. | 1009m.b. | 13 | 13.4 | 17.0 | 10.1 | 23 | 9.7 |
| | 1000 | 23 | 175 | 221 | 103 | 23 | 11.6 | 19.6 | 10.6 | 23 | 9.3 |
| | 850 | 23 | 1533 | 1591 | 1476 | 23 | 7.9 | 15.6 | 1.3 | 22 | -0.8 |
| | 700 | 23 | 3105 | 3193 | 2990 | 23 | 2.6 | 2.9 | -11.1 | 20 | -9.6 |
| | 600 | 23 | 4310 | 4413 | 4186 | 23 | 19.7 | -6.0 | -19.3 | 18 | -17.7 |
| | 500 | 23 | 4688 | 5809 | 5316 | 23 | 21.3 | -16.2 | -27.8 | 16 | -24.3 |
| | 400 | 23 | 7353 | 7170 | 710 | 23 | 52.1 | -28.5 | -49.1 | 10 | -35.6 |
| | 300 | 22 | 9247 | 9434 | 9021 | 22 | 47.1 | -40.8 | -55.0 | — | — |
| | 200 | 21 | 11890 | 12074 | 11635 | 21 | 59.1 | -53.3 | -65.7 | — | — |
| | 150 | 17 | 13665 | 13835 | 13426 | 17 | 62.0 | -55.6 | -67.0 | — | — |
| | 100 | 16 | 16146 | 16725 | 15972 | 16 | 65.0 | -57.8 | -72.2 | — | — |
| | 70 | 14 | 18325 | 18400 | 18230 | 14 | 63.4 | -58.0 | -74.0 | — | — |
| | 60 | — | — | — | — | — | — | — | — | — | — |
| | 50 | 8 | 20418 | 20514 | 20324 | 8 | 58.1 | -54.9 | -62.5 | — | — |
| | 40 | — | — | — | — | — | — | — | — | — | — |
| | 30 | 7 | 23674 | 23796 | 23496 | 7 | 62.5 | -49.4 | -61.0 | — | — |
| | 20 | 4 | 26292 | 26410 | 26050 | 4 | 49.5 | -46.2 | -55.3 | — | — |
| | 10 | — | — | — | — | — | — | — | — | — | — |
| Helwan (A) 1000 U.T. | Surface | 27 | 1001m.b. | 1005m.b. | 993m.b. | 27 | 13.0 | 20.0 | 7.4 | 27 | 6.8 |
| | 1000 | 27 | 148 | 182 | 81 | 23 | 13.5 | 20.0 | 7.4 | 23 | 6.5 |
| | 850 | 27 | 1511 | 161 | 1476 | 27 | 9.2 | 18.8 | 1.6 | 24 | -2.2 |
| | 700 | 27 | 3093 | 3178 | 2976 | 27 | 0.4 | 6.5 | -8.9 | 24 | -9.7 |
| | 600 | 27 | 308 | 147 | 158 | 7 | 8.8 | 3.8 | 15.7 | 21 | -17.9 |
| | 500 | 27 | 2691 | 2811 | 18 | — | 1.3 | 13.4 | -25.6 | 21 | -23.5 |
| | 400 | 27 | 7321 | 7441 | 7096 | 27 | 30.7 | -23.3 | -39.6 | 13 | -31.4 |
| | 300 | 27 | 9304 | 9503 | 9001 | 27 | 14.8 | -37.8 | 54.3 | 10 | — |
| | 200 | 27 | 11928 | 12141 | 11609 | 27 | -58.5 | -53.5 | -63.3 | — | — |
| | 150 | 27 | 13714 | 13922 | 13423 | 27 | -61.4 | -51.0 | -67.8 | — | — |
| | 100 | 24 | 162.5 | 163.4 | 15931 | 24 | -66.5 | -59.6 | -78.7 | — | — |
| | 70 | 17 | 18381 | 18550 | 18220 | 17 | -63.8 | -57.3 | -68.7 | — | — |
| | 60 | 17 | 18325 | 19467 | 19181 | 17 | -61.4 | -56.7 | -64.3 | — | — |
| | 50 | 17 | 2461 | 24791 | 20374 | 16 | -59.3 | -54.4 | -63.9 | — | — |
| | 40 | 15 | 21864 | 24001 | 21730 | 15 | -56.0 | -51.3 | -60.5 | — | — |
| | 30 | 12 | 23706 | 23801 | 23549 | 12 | -53.6 | -50.3 | -59.2 | — | — |
| | 20 | 7 | 26345 | 26520 | 26160 | 7 | -48.9 | -41.8 | -54.2 | — | — |
| | 10 | 1 | 31062 | — | — | 1 | -42.9 | — | — | — | — |
| Aswan (A) 1000 U.T. | Surface | 23 | 993m.b. | 995m.b. | 991m.b. | 23 | 13.0 | 20.0 | 7.7 | 23 | 3.9 |
| | 1000 | 18 | 133 | 153 | 108 | — | — | — | — | — | — |
| | 850 | 23 | 1499 | 1538 | 1480 | 23 | 9.9 | 18.2 | 3.0 | 22 | -0.6 |
| | 700 | 23 | 3099 | 3163 | 3007 | 23 | 2.0 | 6.4 | -5.0 | 9 | -9.4 |
| | 600 | 23 | 4316 | 4407 | 4204 | 23 | -4.9 | -1.9 | -11.0 | 9 | -14.9 |
| | 500 | 23 | 5724 | 5828 | 5586 | 23 | -14.1 | -10.3 | -18.1 | 8 | -23.3 |
| | 400 | 23 | 7383 | 7493 | 7206 | 23 | -26.2 | -21.9 | -32.0 | 5 | -32.6 |
| | 300 | 22 | 9402 | 9610 | 9181 | 22 | -41.3 | -36.9 | -49.6 | — | — |
| | 200 | 22 | 12056 | 12302 | 11801 | 22 | -58.1 | -54.8 | -60.7 | — | — |
| | 150 | 21 | 13256 | 14078 | 13571 | 21 | -66.9 | -64.4 | -70.6 | — | — |
| | 100 | 14 | 16238 | 16409 | 16011 | 14 | -73.0 | -67.6 | -78.6 | — | — |
| | 70 | 11 | 18328 | 18530 | 18120 | 11 | -70.6 | -66.4 | -75.2 | — | — |
| | 60 | — | — | — | — | — | — | — | — | — | — |
| | 50 | 11 | 20374 | 20552 | 20207 | 11 | -60.7 | -58.0 | -63.7 | — | — |
| | 40 | — | — | — | — | — | — | — | — | — | — |
| | 30 | 8 | 23596 | 23773 | 23053 | 8 | -53.7 | -49.7 | -57.6 | — | — |
| | 20 | 4 | 26202 | 26339 | 26079 | 4 | -50.5 | -46.6 | -53.2 | — | — |
| | 10 | 2 | 30743 | 30873 | 30613 | 2 | -47.6 | -47.5 | -47.8 | — | — |

N = The number of cases the element has been observed during the month.

UPPER AIR CLIMATOLOGICAL DATA

Table B1 (contd).—MONTHLY MEANS AND MONTHLY ABSOLUTE HIGHER & LOWER VALUES OF ALTITUDE, AIR TEMPERATURE & DEW POINT AT STANDARD AND SELECTED PRESSURE SURFACES

DECEMBER — 1964

| Station | Pressure Surface Millibar | Altitude of Pressure Surface (gpm) | | | | Temperature (°C) | | | | Dew Point (°C) | |
|------------------------|------------------------------|------------------------------------|------------------------|------------------------|------------------------|------------------|-------|---------|--------|----------------|-------|
| | | N | Mean | Highest | Lowest | N | Mean | Highest | Lowest | N | Mean |
| Mersa Matruh 1200 U.T. | Surface . . . | 23 | 1017 [*] m.b. | 1022 [*] m.b. | 1009 [*] m.b. | 23 | 17.7 | 22.3 | 12.2 | 23 | 11.4 |
| | 1000 . . . | 23 | 169 | 220 | 106 | 23 | 16.4 | 23.2 | 11.7 | 23 | 9.7 |
| | 850 . . . | 23 | 1534 | 1581 | 1449 | 23 | 8.9 | 15.1 | — 0.6 | 22 | 1.2 |
| | 700 . . . | 23 | 3099 | 3185 | 2982 | 23 | — 2.6 | 2.6 | —10.3 | 20 | — 9.0 |
| | 600 . . . | 23 | 4305 | 4410 | 4156 | 23 | —10.5 | — 6.9 | —17.4 | 16 | —16.5 |
| | 500 . . . | 23 | 5680 | 5808 | 5496 | 23 | —20.0 | —15.0 | —27.6 | 10 | —24.4 |
| | 400 . . . | 22 | 7305 | 7458 | 7064 | 22 | —32.2 | —26.6 | —39.5 | 7 | —34.7 |
| | 300 . . . | 22 | 9279 | 9483 | 8970 | 22 | —46.6 | —39.6 | —54.0 | — | — |
| | 200 . . . | 22 | 11889 | 12113 | 11592 | 22 | —58.4 | —52.2 | —62.4 | — | — |
| | 150 . . . | 17 | 13686 | 13930 | 13450 | 17 | —60.4 | —55.6 | —63.6 | — | — |
| | 100 . . . | 15 | 16212 | 16409 | 16060 | 15 | —64.2 | —59.2 | —68.9 | — | — |
| | 70 . . . | 12 | 18409 | 18580 | 18280 | 12 | —60.2 | —52.6 | —65.6 | — | — |
| | 50 . . . | 9 | 20524 | 20618 | 20378 | 9 | —56.9 | —51.0 | —61.2 | — | — |
| | 30 . . . | 4 | 23877 | 24001 | 23748 | 4 | —50.7 | —47.0 | —55.8 | — | — |
| | 20 . . . | 3 | 26494 | 26657 | 26383 | 3 | —46.5 | —45.4 | —47.5 | — | — |
| | 10 . . . | — | — | — | — | — | — | — | — | — | — |
| Helwan 1200 U.T. | Surface . . . | 26 | 1000 [*] m.b. | 1003 [*] m.b. | 992 [*] m.b. | 26 | 19.4 | 24.3 | 13.2 | 29 | 7.3 |
| | 1000 . . . | 26 | 139 | 163 | 76 | 18 | 19.8 | 23.5 | 14.6 | 18 | 7.5 |
| | 850 . . . | 26 | 1509 | 1555 | 1424 | 26 | 9.7 | 17.7 | 0.4 | 19 | — 1.6 |
| | 700 . . . | 26 | 3092 | 3165 | 2363 | 26 | — 1.2 | 4.7 | — 7.7 | 20 | — 8.4 |
| | 600 . . . | 26 | 4307 | 4395 | 4147 | 26 | — 8.7 | — 3.0 | —15.5 | 18 | —15.6 |
| | 500 . . . | 26 | 5696 | 5821 | 5497 | 26 | —18.6 | —10.4 | —25.6 | 16 | —24.4 |
| | 400 . . . | 26 | 7225 | 7494 | 7070 | 26 | —30.2 | —24.8 | —39.5 | 12 | —33.9 |
| | 300 . . . | 26 | 9309 | 9523 | 8994 | 26 | —44.7 | —38.5 | —54.0 | — | — |
| | 200 . . . | 26 | 11937 | 12164 | 11646 | 26 | —58.0 | —50.4 | —65.0 | — | — |
| | 150 . . . | 26 | 13735 | 13954 | 13444 | 26 | —61.2 | —54.0 | —70.1 | — | — |
| | 100 . . . | 24 | 16228 | 16397 | 16026 | 34 | —66.4 | —59.4 | —73.6 | — | — |
| | 70 . . . | 19 | 18400 | 18530 | 18260 | 19 | —64.0 | —57.5 | —69.1 | — | — |
| | 60 . . . | 17 | 19349 | 19476 | 19236 | 17 | —60.3 | —54.9 | —65.2 | — | — |
| | 50 . . . | 16 | 20590 | 20620 | 20390 | 16 | —58.1 | —52.6 | —61.7 | — | — |
| | 40 . . . | 12 | 21870 | 22040 | 21824 | 12 | —54.9 | —50.7 | —58.9 | — | — |
| | 30 . . . | 10 | 23790 | 23904 | 23706 | 10 | —50.6 | —42.8 | —55.5 | — | — |
| | 20 . . . | 7 | 26479 | 26616 | 26382 | 7 | —45.5 | —43.9 | —49.8 | — | — |
| | 10 . . . | — | — | — | — | — | — | — | — | — | — |
| Awan 1200 U.T. | Surface . . . | 25 | 992 [*] m.b. | 995 [*] m.b. | 991 [*] m.b. | 25 | 23.7 | 29.1 | 17.5 | 25 | 6.2 |
| | 1000 . . . | 25 | 124 | 150 | 105 | — | — | — | — | — | — |
| | 850 . . . | 25 | 1507 | 1550 | 1466 | 25 | 11.2 | 18.3 | 2.4 | 22 | — 0.3 |
| | 700 . . . | 25 | 3103 | 3173 | 3020 | 25 | 3.2 | 9.6 | — 2.9 | 9 | —10.8 |
| | 600 . . . | 25 | 4336 | 4428 | 4231 | 25 | — 3.9 | 0.2 | — 8.7 | 9 | —17.8 |
| | 500 . . . | 20 | 5761 | 5855 | 5624 | 25 | —13.1 | — 8.7 | —17.6 | 4 | —25.3 |
| | 400 . . . | 15 | 7415 | 7529 | 7260 | 25 | —24.8 | —19.9 | —30.5 | 5 | —30.9 |
| | 300 . . . | 25 | 9446 | 9578 | 9284 | 25 | —39.4 | —34.1 | —44.6 | 2 | —42.8 |
| | 200 . . . | 25 | 12112 | 12316 | 11885 | 25 | —57.1 | —52.0 | —61.1 | — | — |
| | 150 . . . | 24 | 13902 | 14073 | 13741 | 24 | —64.8 | —57.3 | —70.0 | — | — |
| | 100 . . . | 19 | 16352 | 16743 | 16074 | 19 | —71.2 | —61.0 | —78.7 | — | — |
| | 70 . . . | 10 | 18451 | 18590 | 18320 | 10 | —67.1 | —56.6 | —75.9 | — | — |
| | 50 . . . | 7 | 20509 | 20585 | 20442 | 7 | —59.3 | —56.5 | —63.6 | — | — |
| | 30 . . . | 6 | 23776 | 23849 | 23632 | 6 | —50.7 | —47.3 | —53.5 | — | — |
| | 20 . . . | 6 | 26444 | 26540 | 26352 | 6 | —45.0 | —49.8 | —48.8 | — | — |
| | 10 . . . | — | — | — | — | — | — | — | — | — | — |

N = The number of cases the element has been observed during the month.

Table B 2.—MEAN AND EXTREME VALUES OF THE FREEZING LEVEL AND THE TROPOPAUSE.

THE HIGHEST WIND SPEED IN THE UPPER AIR

DECEMBER -- 1964

| Station | Freezing level | | | | | | | | | First Tropopause | | | | | | | | | Highest wind speed | | | |
|------------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|------------------|----------------|------------------|----------------|----------------|------------------|----------------|----------------|------------------|--------------------|----------------|------------------------|----------------|
| | Mean | | | Highest | | | Lowest | | | Mean | | | Highest | | | Lowest | | | Altitude (gpm) | Pressure (mb.) | Direction (000 - 360)° | Speed in Knots |
| | Altitude (gpm) | Pressure (mb.) | Dew point (°C) | Altitude (gpm) | Pressure (mb.) | Dew point (°C) | Altitude (gpm) | Pressure (mb.) | Dew point (°C) | Altitude (gpm) | Pressure (mb.) | Temperature (°C) | Altitude (gpm) | Pressure (mb.) | Temperature (°C) | Altitude (gpm) | Pressure (mb.) | Temperature (°C) | | | | |
| 0000 U.T. | (N) | (N) | (N) | | | | | | | (N) | (N) | (N) | | | | | | | | | | |
| Mersa Matruh (A) | 2644 (23) | 743 (23) | -5.5 (21) | 3530 | 668 | -8.4 | 1350 | 863 | -3.7 | 11766 (18) | 206 (18) | -60.9 (18) | 15060 | 122 | -72.4 | 8990 | 304 | -54.8 | 11090 | 231 | 260 | 148 |
| Helwan | 2924 (27) | 718 (27) | -6.6 (22) | 3980 | 633 | --- | 1700 | 828 | -0.9 | 12053 (25) | 201 (25) | -61.5 (25) | 17000 | 90 | -73.4 | 8340 | 332 | -50.8 | 13350 | 160 | 270 | 122 |
| Aswan . . . (A) | 3241 (23) | 689 (23) | -12.0 (12) | 4380 | 600 | -11.8 | 1600 | 836 | -9.2 | 14863 (15) | 124 (15) | -70.9 (15) | 17290 | 84 | -81.0 | 12940 | 166 | -65.6 | 13060 | 172 | 300 | 141 |
| 1800 U.T. | (N) | (N) | (N) | | | | | | | (N) | (N) | (N) | | | | | | | | | | |
| Mersa Matruh (A) | 2660 (23) | 711 (23) | -6.4 (19) | 3490 | 673 | -9.3 | 1430 | 857 | -6.3 | 12039 (15) | 201 (15) | -60.6 (15) | 16640 | 96 | -70.6 | 9660 | 266 | -53.5 | 11235 | 225 | 270 | 172 |
| Helwan | 2965 (26) | 714 (26) | -7.3 (12) | 3840 | 643 | -5.2 | 1510 | 842 | -3.4 | 12058 (25) | 200 (25) | -60.9 (25) | 15000 | 127 | -69.8 | 9020 | 298 | -49.7 | 12750 | 176 | 290 | 158 |
| Aswan . . . (A) | 3588 (25) | 659 (25) | -10.5 (11) | 4410 | 598 | --- | 1700 | 816 | -4.4 | 14707 (18) | 136 (18) | -67.9 (18) | 17740 | 79 | -79.0 | 10590 | 258 | -43.0 | 11810 | 210 | 310 | 130 |

N = The Number of cases the element has been observed during the month.

Table B 3.—NUMBER OF OCCURRENCES OF WIND DIRECTION WITHIN SPECIFIED RANGES AND THE MEAN SCALAR WIND SPEED AT THE STANDARD AND SELECTED PRESSURE SURFACES.
MERSA MATRUH (A) DECEMBER 1964

| Time | Pteasure Surface (Millibar) | Wind between ranges of direction (000—360)° | | | | | | | | | | | | | | | | | | | | | | | | Number of Calm winds | Total Number of Observations (T N) | Mean Sclar wind Speed (Knots) |
|-----------|--------------------------------|---|-----------|-----|-----------|-----|-----------|-----|-----------|-----|-----------|-----|-----------|-----|-----------|-----|-----------|-----|-----------|-----|-----------|-----|-----------|-----|-----------|-------------------------|---------------------------------------|----------------------------------|
| | | 345 | | 015 | | 045 | | 075 | | 105 | | 135 | | 165 | | 195 | | 225 | | 255 | | 285 | | 315 | | | | |
| | | 014 | | 044 | | 074 | | 104 | | 134 | | 164 | | 194 | | 224 | | 254 | | 284 | | 314 | | 344 | | | | |
| | | N | (ff) m | N | (ff) m | N | (ff) m | N | (ff) m | N | (ff) m | N | (ff) m | N | (ff) m | N | (ff) m | N | (ff) m | N | (ff) m | N | (ff) m | N | (ff) m | | | |
| 0000 U.T. | Surface | 1 | 11 | 2 | 4 | 0 | — | 1 | 10 | 4 | 14 | 5 | 10 | 2 | 6 | 2 | 10 | 5 | 7 | 5 | 12 | 0 | — | 1 | 7 | 3 | 31 | 9 |
| | 1000 | 2 | 4 | 3 | 6 | 1 | 17 | 0 | — | 2 | 16 | 5 | 14 | 4 | 11 | 0 | — | 1 | 31 | 2 | 22 | 6 | 10 | 4 | 12 | 1 | 31 | 12 |
| | 850 | 0 | — | 0 | — | 1 | 7 | 0 | — | 1 | 4 | 2 | 8 | 2 | 10 | 4 | 18 | 5 | 11 | 5 | 17 | 4 | 12 | 6 | 22 | 1 | 31 | 14 |
| | 700 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 1 | 5 | 1 | 17 | 9 | 29 | 5 | 25 | 7 | 27 | 6 | 25 | 2 | 31 | 24 |
| | 600 | 1 | 26 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 1 | 3 | 7 | 33 | 12 | 39 | 5 | 22 | 4 | 24 | 1 | 31 | 30 |
| | 500 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 6 | 33 | 17 | 42 | 4 | 28 | 4 | 26 | 0 | 31 | 36 |
| | 400 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 5 | 45 | 15 | 48 | 5 | 56 | 6 | 40 | 0 | 31 | 48 |
| | 300 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 6 | 60 | 13 | 74 | 4 | 67 | 5 | 63 | 0 | 28 | 48 |
| | 250 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 3 | 78 | 12 | 91 | 5 | 64 | 2 | 82 | 0 | 22 | 82 |
| | 200 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 6 | 64 | 1 | 55 | 1 | 71 | 0 | 8 | 64 |
| | 150 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 1 | 53 | 1 | 30 | 0 | — | 1 | 34 | 0 | 3 | 39 |
| | 100 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 1 | 13 | 0 | — | 0 | — | 0 | 1 | 13 |
| | 70 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 1 | 10 | 0 | — | 0 | — | 0 | 1 | 10 |
| | 60 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 1 | 10 | 1 | — | 0 | — | 0 | 1 | 10 |
| | 50 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 1 | 15 | — | — | 0 | — | 0 | — | 0 | 1 | 15 |
| 40 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | — | — | 0 | — | 0 | — | 0 | — | — | — |
| 30 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | |
| 20 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | |
| 10 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | |
| 1200 U.T. | Surface | 4 | 7 | 2 | 6 | 2 | 10 | 1 | 10 | 2 | 12 | 4 | 12 | 1 | 9 | 1 | 16 | 0 | — | 3 | 16 | 3 | 12 | 7 | 17 | 1 | 31 | 12 |
| | 1000 | 3 | 7 | 1 | 7 | 1 | 10 | 1 | 5 | 2 | 14 | 4 | 10 | 2 | 7 | 1 | 17 | 0 | — | 2 | 18 | 5 | 17 | 7 | 17 | 2 | 31 | 12 |
| | 850 | 5 | 14 | 0 | — | 0 | — | 0 | — | 2 | 9 | 2 | 4 | 2 | 13 | 5 | 12 | 2 | 16 | 3 | 13 | 5 | 16 | 5 | 25 | 0 | 31 | 15 |
| | 700 | 2 | 26 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 2 | 24 | 5 | 29 | 9 | 20 | 10 | 20 | 3 | 28 | 0 | 31 | 23 |
| | 600 | 3 | 20 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 1 | 51 | 1 | 43 | 6 | 27 | 10 | 31 | 7 | 31 | 3 | 28 | 0 | 31 | 30 |
| | 500 | 1 | 8 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 6 | 44 | 13 | 38 | 6 | 42 | 5 | 33 | 0 | 31 | 35 |
| | 400 | 2 | 30 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 1 | 35 | 5 | 42 | 13 | 49 | 6 | 55 | 3 | 38 | 0 | 30 | 46 |
| | 300 | 1 | 13 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 5 | 60 | 11 | 67 | 8 | 66 | 4 | 49 | 0 | 29 | 61 |
| | 250 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 3 | 87 | 15 | 86 | 5 | 86 | 4 | 61 | 0 | 27 | 82 |
| | 200 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 1 | 74 | 10 | 68 | 5 | 44 | 2 | 64 | 0 | 18 | 61 |
| | 150 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 3 | 44 | 5 | 28 | 1 | 44 | 0 | 9 | 35 |
| | 100 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 2 | 19 | 0 | — | 0 | 2 | 14 |
| | 70 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 1 | 14 | 0 | — | 0 | 1 | 14 |
| | 60 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 1 | 12 | 0 | — | 0 | 1 | 12 |
| | 50 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 1 | 10 | 0 | 1 | 10 |
| | 40 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | 0 | — | — | — | — | — | — | — | — |
| | 30 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| | 20 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| | 10 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |

N = The number of cases the element has been observed during the month.

TN = The total number of cases the wind has been observed for all directions during the month.

Table B 3—NUMBER OF OCCURRENCES OF WIND DIRECTION WITHIN SPECIFIED RANGES AND THE MEAN SCALAR WIND SPEED AT THE STANDARD AND SELECTED PRESSURE SURFACES.

HELWAN—DECEMBER 1964

| Time | Pressure Surface (Millibar) | Wind between ranges of direction (000-360)* | | | | | | | | | | | | | | | | Number of Calm winds | Total Number of observations (TN) | Mean Scalar wind Speed (Knots) | | | | | | | | | |
|------------|--------------------------------|---|------|-----|------|-----|------|-----|------|-----|------|-----|------|-----|------|-----|------|-------------------------|--------------------------------------|-----------------------------------|-----|------|-----|------|-----|------|-----|------|---|
| | | 345 | | 015 | | 045 | | 075 | | 105 | | 135 | | 165 | | 195 | | | | | 225 | | 255 | | 285 | | 315 | | |
| | | 014 | | 044 | | 074 | | 104 | | 134 | | 164 | | 194 | | 224 | | | | | 254 | | 284 | | 314 | | 344 | | |
| | | N | (ff) | N | (ff) | N | (ff) | N | (ff) | N | (ff) | N | (ff) | N | (ff) | N | (ff) | | | | N | (ff) | N | (ff) | N | (ff) | N | (ff) | |
| | | m | | m | m | | m | m | | m | m | | m | m | | m | m | | m | m | | m | m | | m | | | | |
| 0000 U. T. | Surface | 1 | 5 | 3 | 5 | 7 | 9 | 0 | — | 2 | 4 | 1 | 4 | 1 | 8 | 1 | 10 | 0 | — | 1 | 9 | 1 | 3 | 1 | 5 | — | — | — | — |
| | 1000 | 1 | 15 | 5 | 15 | 5 | 12 | 1 | 8 | 3 | 6 | 1 | 4 | 1 | 10 | 0 | — | — | — | 1 | 9 | 2 | 4 | 1 | 10 | — | — | — | — |
| | 850 | 3 | 10 | 1 | 4 | 1 | 4 | 1 | 4 | 0 | — | 1 | 15 | 0 | — | 3 | 16 | 4 | 16 | 3 | 15 | 7 | 14 | 2 | 9 | — | — | — | — |
| | 700 | 1 | 11 | 0 | — | 0 | — | 0 | — | 0 | — | 1 | 3 | 0 | — | 0 | — | 7 | 16 | 6 | 17 | 7 | 20 | 4 | 10 | — | — | — | — |
| | 600 | 3 | 15 | — | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 1 | 21 | 5 | 32 | 4 | 29 | 9 | 20 | 5 | 19 | — | — | — | — |
| | 500 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 4 | 35 | 6 | 40 | 10 | 31 | 7 | 20 | — | — | — | — |
| | 400 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 1 | 20 | 2 | 38 | 8 | 51 | 14 | 33 | 2 | 39 | — | — | — | — |
| | 300 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 13 | 52 | 9 | 56 | 2 | 64 | — | — | — | — |
| | 200 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 11 | 82 | 10 | 61 | 0 | — | — | — | — | — |
| | 150 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 15 | 60 | 2 | 67 | 1 | 60 | — | — | — | — |
| | 100 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 7 | 52 | 1 | 35 | 0 | — | — | — | — | — |
| | 70 | 1 | 21 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 4 | 43 | 0 | — | 0 | — | — | — | — | — |
| | 60 | 0 | — | 0 | — | 0 | — | 1 | 30 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 1 | 29 | 1 | 22 | 0 | — | — | — | — | — |
| | 50 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 1 | 22 | 1 | 37 | 0 | — | — | — | — | — |
| 40 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 1 | 48 | 0 | — | 0 | — | — | — | — | — | — |
| 30 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| 20 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| 10 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| 0000 U. T. | Surface | 1 | 12 | 3 | 15 | 2 | 15 | 0 | — | 1 | 5 | 0 | — | 2 | 7 | 7 | 6 | 3 | 12 | 1 | 18 | 5 | 8 | 0 | — | — | — | — | — |
| | 1000 | 1 | 12 | 3 | 17 | 2 | 18 | 0 | — | 0 | — | 0 | — | 2 | 2 | 2 | 5 | 1 | 8 | 2 | 10 | 3 | 7 | 2 | 9 | — | — | — | — |
| | 850 | 3 | 17 | 0 | — | 3 | 12 | 0 | — | 0 | — | 0 | — | 3 | 13 | 0 | — | 4 | 20 | 7 | 22 | 4 | 14 | 2 | 13 | — | — | — | — |
| | 700 | 1 | 15 | 1 | 13 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 2 | 24 | 5 | 18 | 4 | 24 | 10 | 19 | 2 | 14 | — | — | — | — |
| | 600 | 1 | 21 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 1 | 30 | 5 | 25 | 2 | 26 | 12 | 26 | 4 | 16 | — | — | — | — |
| | 500 | 2 | 36 | — | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 1 | 14 | 5 | 27 | 11 | 36 | — | 37 | 0 | — | — | — | — | — |
| | 400 | 1 | 46 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 3 | 92 | 13 | 42 | 6 | 51 | 2 | 50 | — | — | — | — |
| | 300 | 1 | 84 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 2 | 62 | 14 | 56 | 3 | 64 | 3 | 50 | — | — | — | — |
| | 200 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 14 | 64 | 3 | 76 | 1 | 104 | — | — | — | — |
| | 150 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 7 | 72 | 3 | 59 | 1 | 132 | — | — | — | — |
| | 100 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 1 | 41 | 2 | 56 | 3 | 44 | 0 | — | — | — | — | — |
| | 70 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 1 | 36 | 0 | — | — | — | — | — |
| | 60 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 1 | 29 | 0 | — | 0 | — | — | — | — | — |
| | 50 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 1 | 27 | 0 | — | 0 | — | 0 | — | — | — | — | — |
| 40 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 1 | 21 | 0 | — | 0 | — | — | — | — | — | |
| 30 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | 1 | 20 | 0 | — | 0 | — | — | — | — | — | — |
| 20 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| 10 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |

N = The number of cases the element has been observed during the month.
 TN = Total number of cases the wind has been observed for all directions during the month.

Table B 3 (contd.).—NUMBER OF OCCURRENCES OF WIND DIRECTION WITHIN SPECIFIED RANGES AND THE MEAN SCALAR WIND SPEED AT THE STANDARD AND SELECTED PRESSURE SURFACES

ASWAN (A) DECEMBER -- 1964

| Time | Pressure Surface Millibar | Wind between specified ranges of direction (000—300)* | | | | | | | | | | | | | | | | | | | | | | | | Number of calm winds | Total number of observations (TN) | Mean scalar wind Speed (knots) |
|-----------|------------------------------|---|-----------|-----------------|-----------|-----------------|-----------|-----------------|-----------|-----------------|-----------|-----------------|-----------|-----------------|-----------|-----------------|-----------|-----------------|-----------|-----------------|-----------|-----------------|-----------|-----------------|-----------|-------------------------|--------------------------------------|-----------------------------------|
| | | 345 / 014 | | 015 / 044 | | 045 / 074 | | 075 / 104 | | 105 / 134 | | 135 / 164 | | 165 / 194 | | 195 / 224 | | 225 / 254 | | 255 / 284 | | 285 / 314 | | 315 / 344 | | | | |
| | | N | (ff) m | N | (ff) m | N | (ff) m | N | (ff) m | N | (ff) m | N | (ff) m | N | (ff) m | N | (ff) m | N | (ff) m | N | (ff) m | N | (ff) m | N | (ff) m | | | |
| 0000 U.T. | Surface | 11 | 11 | 5 | 10 | 0 | — | 1 | 12 | 0 | — | 0 | — | 0 | — | 0 | — | 1 | 6 | 0 | — | 0 | — | 4 | 10 | 1 | 23 | 10 |
| | 1000 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | |
| | 850 | 5 | 8 | 2 | 12 | 5 | 9 | 1 | 3 | 1 | 8 | 0 | — | 0 | — | 1 | 6 | 0 | — | 3 | 10 | 1 | 13 | 4 | 16 | 0 | 23 | 10 |
| | 700 | 3 | 18 | 2 | 22 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 1 | 14 | 4 | 16 | 1 | 27 | 7 | 19 | 5 | 18 | 0 | 23 | 19 |
| | 600 | 3 | 26 | — | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 1 | 24 | 6 | 30 | 7 | 29 | 6 | 50 | 0 | 23 | 25 |
| | 500 | 0 | — | — | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 1 | 25 | 1 | 31 | 8 | 46 | 8 | 39 | 5 | 36 | 0 | 23 | 40 |
| | 400 | 0 | — | — | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 1 | 25 | 1 | 69 | 8 | 55 | 12 | 55 | 1 | 60 | 0 | 23 | 53 |
| | 300 | 1 | 92 | — | — | 0 | — | 0 | — | 0 | — | 1 | 17 | 0 | — | 0 | — | 0 | — | 5 | 83 | 11 | 68 | 1 | 50 | 0 | 19 | 69 |
| | 200 | 0 | — | — | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 5 | 93 | 5 | 61 | 0 | — | 0 | 10 | 77 |
| | 150 | 0 | — | — | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 2 | 90 | 2 | 94 | 0 | — | 0 | 4 | 92 |
| | 100 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| | 70 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| | 60 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| 50 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | |
| 40 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | |
| 30 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | |
| 20 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | |
| 10 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | |
| 1200 U.T. | Surface | 16 | 9 | 1 | 8 | 1 | 8 | 0 | — | 1 | 6 | 0 | — | 0 | — | 0 | — | 0 | — | 1 | 15 | 0 | — | 4 | 12 | 1 | 25 | 9 |
| | 1000 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | |
| | 850 | 2 | 18 | 3 | 12 | 6 | 7 | 2 | 14 | 1 | 5 | 1 | 10 | 1 | 1 | 1 | 1 | 10 | 1 | 16 | 1 | 11 | 5 | 16 | 0 | 25 | 11 | |
| | 700 | 1 | 19 | 4 | 22 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 1 | 4 | 6 | 26 | 7 | 15 | 6 | 21 | 0 | 25 | 20 |
| | 600 | 1 | 25 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 11 | 33 | 6 | 25 | 7 | 32 | 0 | 25 | 30 |
| | 500 | 1 | 33 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 1 | 18 | 0 | — | 0 | — | 14 | 42 | 7 | 33 | 2 | 46 | 0 | 25 | 38 |
| | 400 | 2 | 48 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 13 | 47 | 6 | 53 | 0 | — | 0 | 21 | 49 |
| | 300 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 9 | 59 | 8 | 61 | 1 | 53 | 0 | 18 | 60 |
| | 200 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 8 | 80 | 6 | 60 | 1 | 105 | 0 | 15 | 74 |
| | 150 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 5 | 70 | 3 | 69 | 0 | — | 0 | 8 | 70 |
| | 100 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 2 | 58 | 0 | — | 0 | — | 0 | 2 | 58 |
| | 70 | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 0 | — | 1 | 1 | 0 |
| | 60 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | |
| 50 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | | |
| 40 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | | |
| 30 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | | |
| 20 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | | |
| 10 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | | |

N — The number of cases the wind has been observed from the range of directions during the month.

TN — The total number of cases the wind has been observed for all directions during the month.

REVIEW OF AGRO-METEOROLOGICAL STATIONS

EL KASR DECEMBER 1964

The month was mild and humid as regards to mean values of air temperature and humidity respectively.

The daily mean air temperature at 2 metres was slightly above normal (+0.3°C) and the mean daily relative humidity was 8% above normal. Light warm spells occurred on the 4th., 22nd., 27th. and 28 th. The most significant was the first one which gave the absolute maximum air temperature for the month (25.4°C). A moderate cold spell prevailed between the 7th. and the 15th. giving the lowest maximum air temperature (15.6°C) on the 9th.

Total amount of rainfall was remarkably above normal (+57.8 mms) and occurred between the 7th. and the 14th. inclusive. The maximum amount of rainfall was 27.0 mms and occurred on the 9th. The station field was flooded by rainfall from the southern higher level areas and accordingly measurements of soil temperatures during the period 8th. to 15th. were not taken. The extreme maximum soil temperatures at all depths occurred on the 1st. of the month when the maximum soil temperatures were 28.3 and 23.6°C at 0.3 and 5 cms depths respectively. Excluding the mentioned period, the lowest minimum soil temperatures recorded for the depths between 0.3 and 20 cms inclusive occurred on the last day of the month when the minimum soil temperatures were 7.0 and 8.8°C at 0.3 and 5 cms depths respectively. At 50, 100 and 200 cms depths the lowest minimum soil temperatures recorded occurred on the 15th., 30th. and 31st. of the month respectively.

The total actual duration of bright sunshine was 60% of the total possible duration with maximum on the 6th. (9.7 hours) and minimum on the 11th. (0.0 hours).

TAHRIR DECEMBER 1964

This month was cold and rainy, mainly in the second week, when the total of 20.4 millimetres rain fell, and when the mean maximum air temperature was 17.3 degrees, against 21.2 degrees for the whole month.

As to the monthly mean values of air temperature, sunshine duration, piche and pan A evaporation and wind speed at 2 metres, this month gave the lowest values for December; while on the reverse, its rainfall was the highest monthly total for December since 1960 when data for Tahrir has been published for the 1st. time.

Travelling cold fronts, this month were associated with heavy rainfall and strong winds during the second week in particular.

Deviations from last December of mean air temperature, relative humidity, vapour pressure were $-0.5^{\circ}\text{C} + 1\%$ and $+ 0.5$ millimetre respectively, while that of mean wind at 2 metres was -0.3 metre per second.

Total sunshine duration was less by 27.2 hours or 9% of possible duration while total rainfall exceeded its corresponding value of last year by 17.3 millimetres and exceeded its corresponding value of December 1961 by 7.5 mms which comes as the second order of the greatest total rain ever fell in December since 1960.

Mean evaporation of piche and of pan A was less by 2.5 and 1.34 millimetres respectively, which conforms with the deviations in the above mentioned elements.

As for extreme soil temperature at different depths down to one metre, the maxima were found to be less by $1.4 - 2.3$ degrees in the upper 2 centimetres; later the difference becoming of the order of ± 0.1 degree, except at 50 centimetres where the difference was -0.8 degree, a significant deviation which may be attributed to the rainfall water penetrating to that depth. On the other hand, the minima were higher by $0.6 - 2.3$ degrees down to 10 centimetres, after which the difference changed its sign and became of the order of $1.8 - 0.8$ degrees less down to one metre.

GIZA - DECEMBER 1964

This month was slightly cooler and drier than normal. The mean air temperature at 2 metres above ground level, and the total amount of rainfall were slightly below normal (i.e. -1.1°C & -0.7 mm respectively). The daily mean relative humidity was normal.

A cold wave was distinguished from the 5th to the 20th giving rise to the absolute minimum temperature at 5 cms above ground level in the 3 fields together with the absolute minimum air temperature at 2 metres above ground level on 6th and the lowest daily mean, day time mean & night time mean air temperatures on 9th, 7th & 9th respectively.

The minimum air temperature at 5 cms above grass (Libia) fell below 0°C only on the 6th (-2.0°C).

The extreme maximum soil temperature were generally lower than those of the last year, the maximum difference was -5.0°C at 1 cm depth in dry field. The extreme minimum soil temperatures were higher than those of last year for the surface layer down to 10 cms depth, the maximum difference was 3.4°C at 1 cm depth of wet field. For deeper layers the extreme minimum soil temperatures showed irregular insignificant deviations from the corresponding values of December 1963.

The daily mean wind speed at 2 metres above ground was higher than the corresponding value of last year by 0.3 m/sec. The total actual duration of bright sunshine was 24.5 hours less than that of December 1963. The daily mean value of piche evaporation, water pan evaporation, potential evaporation and potential evapotranspiration for grass (Libia) were all less by 1.5, 1.05, 0.4 & 0.7 mms respectively than the corresponding values of last December.

KHARGA — DECEMBER 1964

This month was slightly warmer but sharply drier as compared with the normal values of air temperature and relative humidity at 2 metres above ground.

It was distinguished by a warm spell at the beginning of the month yielding the maximum value of soil temperature for depths 0.3 cms & 1 cm on the 2nd., and the absolute maximum of air temperature at 2 metres in the screen 30.9°C (4.8°C above normal) on the 3rd. as well as the maximum value of minimum air temperature (15.0°C i.e. 4.6 above normal), the maximum values of daily, night and day time means of temperature, the minimum daily mean of relative humidity and the absolute maximum soil temperature for depths between 2 cm. and 20 cms. For further depths the maximum values were recorded on the beginning of the month.

The maximum values of surface wind speed at heights 50, 100, 200 & 300 cms were recorded on the 5th. as well as maximum evaporation from pan class A, piche in free air at different heights and also piche in the screen (20.9 mms i.e. 13.5 mms above normal) while the minimum values of water vapour pressure took place on the 6th.

A pronounced cold wave was experienced on the 6th., yielding the minimum value of maximum air temperature on the 9th. (17.5°C i.e. 7.9°C below normal), and the absolute minimum of air temperature on the 10th. (3.8°C i.e. 5.7°C below normal). On the 13th. the minimum value of daily mean of temperature, the maximum value of relative humidity, the minimum value of water vapour deficit, the minimum value of evaporation from pan class A, piche in free air at different heights and also in the screen (4.4 mms i.e. 3.0 mms below normal) have been marked. The minimum value of soil temperature up to 50 cms depth took place on the 20th. while for further depths were recorded at the end of the month.

The mean surface wind speed dropped to its minimum value on the 29th. during the prevailing warm spell at the end of the month.

The actual sunshine duration was 91.7 % from the possible duration.

The means of maximum, minimum, and daily mean of temperature were all higher than normals by + 0.7°C, + 0.2°C and + 0.8°C respectively.

The mean relative humidity was 12% below the normal, while the evaporation from piche in the screen was 3.0 mms above normal.

**Table C 1.—AIR TEMPERATURE AT 2 METRES ABOVE GROUND
DECEMBER — 19 4**

| STATION | Air Temperature (°C) | | | | | Mean Duration in hours of daily air temperature above the following values. | | | | | | | | | | |
|---------------|----------------------|--------------|-----------------------|-----------------------|---------------------|--|------|------|------|------|------|------|------|------|------|------|
| | Mean Max. | Mean Min. | Mean of the day | Night time mean | Day time mean | 5°C | 0°C | 5°C | 10°C | 15°C | 20°C | 25°C | 30°C | 35°C | 40°C | 45°C |
| El Kasr | 19.8 | 10.3 | 14.8 | 13.3 | 16.9 | 24.0 | 24.0 | 24.0 | 24.0 | 10.7 | 1.4 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Tahrir | 21.2 | 9.0 | 14.2 | 12.4 | 16.6 | 24.0 | 24.0 | 24.0 | 20.3 | 9.1 | 2.4 | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 |
| Giza | 20.9 | 8.4 | 14.1 | 12.3 | 16.5 | 24.0 | 24.0 | 24.0 | 19.2 | 9.9 | 2.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Kharga | 24.6 | 8.3 | 16.4 | 13.8 | 19.7 | 24.0 | 24.0 | 23.8 | 20.2 | 14.1 | 6.4 | 2.0 | 0.1 | 0.0 | 0.0 | 0.0 |

**Table C 2.—ABSOLUTE VALUES OF AIR TEMPERATURE AT 2 METRES ABOVE GROUND,
ABSOLUTE MINIMUM AIR TEMPERATURE AT 5cms ABOVE GROUND OVER
DIFFERENT FIELDS.**

DECEMBER — 1964

| STATION | Max. Temp. at 2 metres (°C) | | | | Min. Temp. at 2 metres (°C) | | | | Min. Temp. at 5 cms. above (°C) | | | |
|---------------|-----------------------------|------|--------|------|-----------------------------|------|--------|------|---------------------------------|------|-------|------|
| | Highest | | Lowest | | Highest | | Lowest | | Dry soil | | Grass | |
| | Value | Date | Value | Date | Value | Date | Value | Date | Value | Date | Value | Date |
| El Kasr | 25.4 | 4 | 15.6 | 9 | 12.9 | 29 | 7.0 | 9 | 5.6 | 9 | — | 6 |
| Tahrir | 26.4 | 28 | 13.7 | 9 | 13.8 | 29 | 5.2 | 6 | 2.4 | 6 | — | — |
| Giza | 24.8 | 1 | 15.5 | 9 | 13.1 | 29 | 4.8 | 6 | 0.0 | 6 | — 2.0 | 6 |
| Kharga | 30.9 | 3 | 17.5 | 9 | 15.0 | 3 | 3.8 | 10 | 1.2 | 12 | — | — |

**Table C 3.—(SOLAR+SKY) RADIATION, DURATION OF BRIGHT SUNSHINE, RELATIVE
HUMIDITY, VAPOUR PRESSURE AT 2 METRES ABOVE GROUND, EVAPORATION
& RAINFALL.**

DECEMBER — 1964

| STATION | (Solar+Sky) Radia- tion gm. cal/cm² | Duration of Bright Sunshine (hours) | | | Relative Humidity. % | | | | | | Vapour pressure (mms) | | | | | | Evapora- tion(mms) | | Rainfall (mms) | | |
|------------|--|--|---------------------------|----|----------------------|--------------|-------------|-----------|--------|------|-----------------------|------------|---------|------|--------|------|-----------------------|---------------|-------------------------|-------------------------|------|
| | | Total Actual monthly | Total Possible monthly | % | Duration in hours | | Mean of day | 1200 U.T. | Lowest | Date | Mean of day | 1200 UT | Highest | Date | Lowest | Date | Piche | Pan class (A) | Total Amount Monthly | Max. Fall in one day | Date |
| | | | | | ✓ 90 % | ✓ 80 % | | | | | | | | | | | | | | | |
| El Kasr .. | 205.2 | 185.0 | 314.6 | 59 | — | — | 78 | 60 | 22 | 4 | 9.2 | 9.2 | 13.4 | 29 | 5.1 | 7 | 8.3 | 4.18 | 92.3 | 27.0 | 9 |
| Tahrir .. | 248.4 | 199.8 | 316.8 | 64 | 7.3 | 12.0 | 76 | 53 | 19 | 4 | 8.9 | 8.7 | 12.7 | 29 | 4.5 | 4 | 5.1 | 2.60 | 20.4 | 9.2 | 9 |
| Giza .. | 259.2 | 207.0 | 307.3 | 68 | 4.1 | 9.0 | 71 | 49 | 30 | 4.5 | 8.3 | 8.3 | 13.0 | 30 | 5.3 | 4 | 5.9 | 5.59 | 5.3 | 2.7 | 11 |
| Kharga .. | 340.6 | 301.9 | 329.2 | 92 | 23 | 0 | 44 | 29 | 13 | 4 | 5.8 | 6.1 | 10.2 | 24 | 3.7 | 6 | 14.3 | 7.07 | 0.0 | — | — |

**TABLE C 4.—EXTREME SOIL TEMPERATURE AT DIFFERENT DEPTHS
IN DIFFERENT FIELDS**

DECEMBER — 1964

| STATION | Highest (H) Lowest (L) | Extreme soil temperature (°C) in dry field at different depths (cms.) | | | | | | | | | | Extreme soil temperature (°C) in grass field at different depths (cms.) | | | | | | | | | |
|----------------|---------------------------|--|------|------|------|------|------|------|------|------|------|--|------|------|------|------|------|------|------|------|-----|
| | | 0.3 | 1 | 2 | 5 | 10 | 20 | 50 | 100 | 200 | 300 | 0.3 | 1 | 2 | 5 | 10 | 20 | 50 | 100 | 200 | 300 |
| El Kasr . . . | H | 28.3 | 25.7 | 25.6 | 23.6 | 21.2 | 18.8 | 18.7 | 20.3 | 22.5 | — | — | — | — | — | — | — | — | — | — | — |
| | L | 7.0 | 7.3 | 7.6 | 8.8 | 10.5 | 13.0 | 15.0 | 17.7 | 20.1 | — | — | — | — | — | — | — | — | — | — | — |
| Tahrir | H | 30.6 | 29.9 | 27.7 | 26.3 | 23.2 | 20.2 | 20.1 | 22.3 | 24.6 | 25.5 | — | — | — | — | — | — | — | — | — | — |
| | L | 4.7 | 4.7 | 5.7 | 8.2 | 9.3 | 11.1 | 15.2 | 18.9 | 21.5 | 23.2 | — | — | — | — | — | — | — | — | — | — |
| Giza | H | 35.2 | 32.0 | 32.2 | 25.1 | 21.8 | 21.4 | 22.8 | 25.2 | 27.2 | 27.1 | 20.2 | 19.7 | 19.2 | 18.2 | 17.8 | 18.0 | 19.4 | 21.0 | 23.1 | — |
| | L | 2.7 | 3.9 | 4.3 | 10.2 | 13.6 | 17.2 | 19.4 | 21.8 | 24.9 | 26.2 | 8.6 | 10.0 | 10.0 | 11.0 | 13.1 | 14.5 | 16.5 | 18.3 | 21.3 | — |
| Kharga | H | 40.0 | 35.4 | 32.9 | 29.0 | 25.5 | 23.8 | 24.5 | 26.6 | 28.8 | 29.1 | — | — | — | — | — | — | — | — | — | — |
| | L | 4.0 | 4.6 | 5.8 | 7.2 | 14.0 | 17.7 | 24.3 | 24.0 | 26.9 | 28.3 | — | — | — | — | — | — | — | — | — | — |

TABLE C 5.—SURFACE WIND

DECEMBER — 1964

| STATION | Wind Speed m/sec (2 metres) | | | Days with surface wind speed at 10 metres. | | | | | | | Max. Gust (knots) at 10 metres | |
|------------------|----------------------------------|-----------------------|---------------------|--|--------------|--------------|--------------|--------------|--------------|--------------|-----------------------------------|------|
| | Mean of the day | Night time mean | Day time mean | ≥10 knots | ≥15 knots | ≥20 knots | ≥25 knots | ≥30 knots | ≥35 knots | ≥40 knots | value (knots) | Date |
| Kasr | 4.1 | 3.7 | 4.5 | — | — | — | — | — | — | — | — | — |
| Tahrir | 2.4 | 1.9 | 3.0 | 20 | 11 | 7 | 5 | 2 | 0 | 0 | 39 | 8 |
| Giza | 2.1 | 1.6 | 2.7 | 28 | 9 | 2 | 0 | 0 | 0 | 0 | 31 | 9 |
| Kharga | 2.8 | 2.2 | 3.8 | — | — | — | — | — | — | — | — | — |

**PRINTED IN A.R.E. BY
THE GENERAL ORGANIZATION
FOR GOVT. PRINTING OFFICES. CAIRO
ALY SULTAN ALY
UNDER-SECRETARY OF STATE
*Chairman of the Board of Directors***